DECEMBER 7, 1953

Questions & Answers . . . p. 26

RAILWAY AGE

NEWS ISSUE

The Standard Railroad WEEKLY for Almost a Century

IN THIS ISSUE

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New A.S.M.E. President

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Reading Instruction car

Lights help Ore movement

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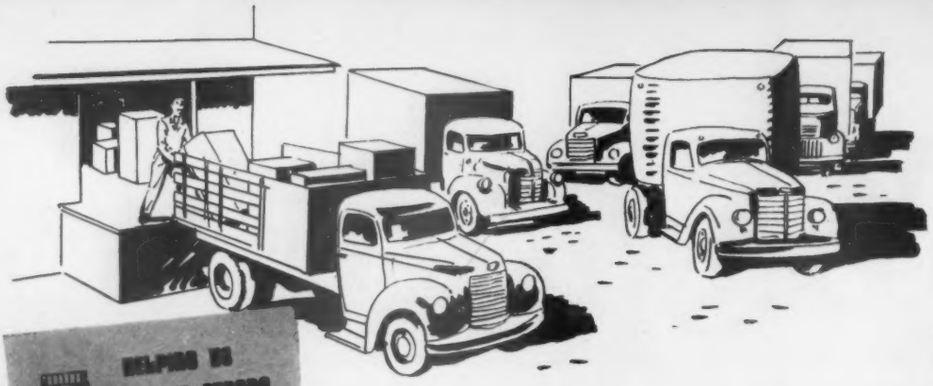

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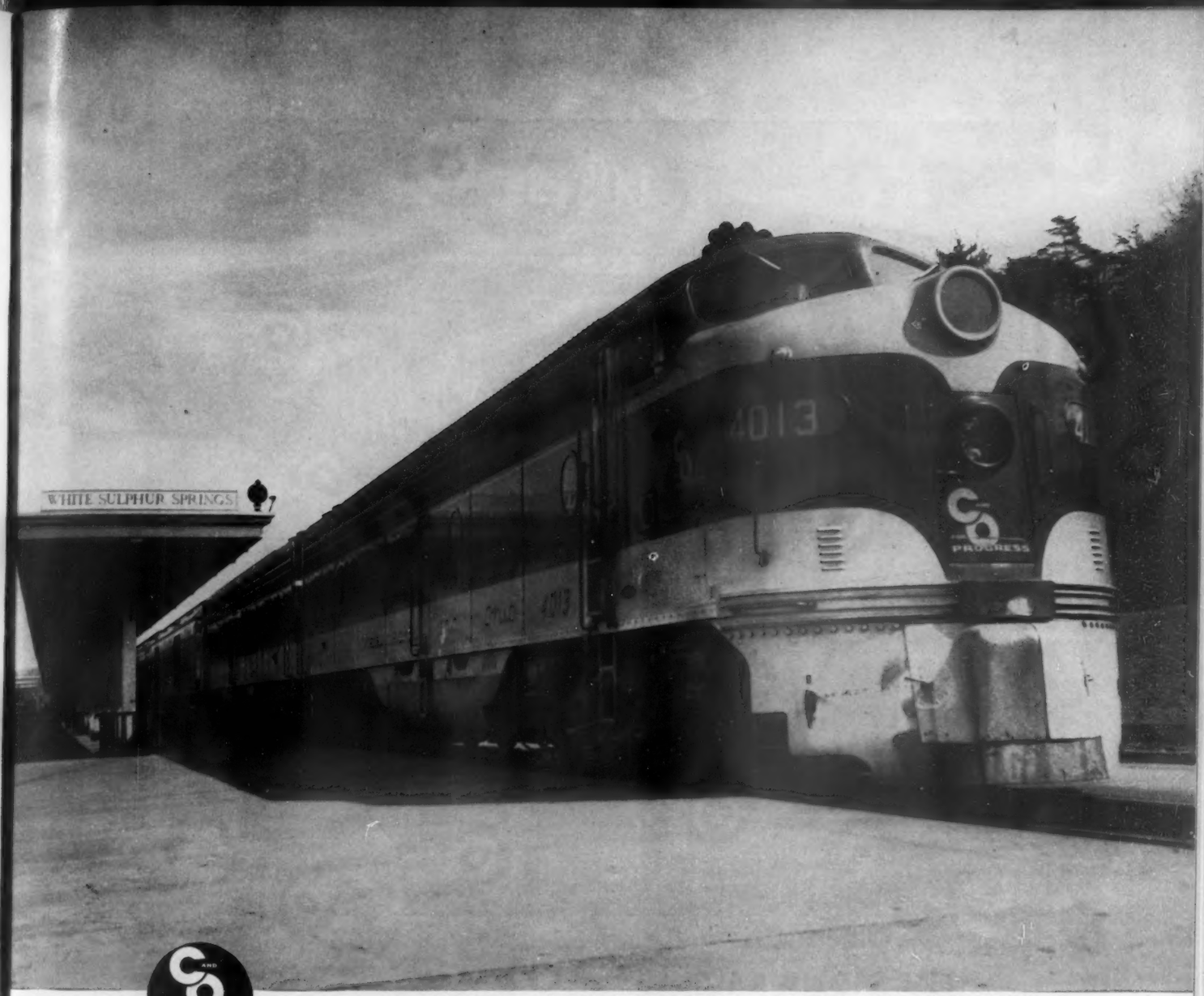

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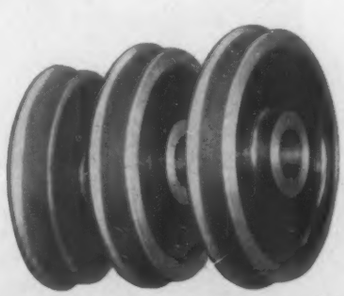

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Dec. 7, 1953 NEWS ISSUE Vol. 135, No. 23

Week at a Glance

Railroads today have a "dynamic quality" and "potential growth" which should put an end to "depression thinking" about the industry and its future prospects, NYC President William White told the Investment Bankers Association of America last week. 11

New departments for better service were announced last week by three railroads—an industrial engineering office "to broaden application of mass production techniques in mass transportation service" by the NYC; a terminal committee "to implement procedures to quicken freight movement through yards and terminals" by the PRR; and a passenger service department "to review passenger services and reduce annual deficits" therefrom, by the B&M. 13, 14, 42

Versatile Army diesels have been developed by the General Electric Company, by making minor changes in standard 80-ton switching units. 19

FORUM: A "horse-and-buggy law" that needs repeal is the New York state "full crew law"—more properly an "excess crew law"—originally enacted back in 1913. 25

Would an hourly per diem rate speed up interchange deliveries? That is one of two topics considered on this week's transportation department Question and Answer page. 26

Lights help in ore movement across the Great Northern's docks at Superior, Wis. 27

Fast turnaround for more net was advocated by John E. Kusik, C&O vice-president—finance, in a recent address in which he raised a number of interesting questions, such as: Are railroads running trains of the right lengths? How high should per diem be to provide turn-

Current Statistics

Operating revenues, nine months	
1953	$ 8,082,250,257
1952	7,753,276,654
Operating expenses, nine months	
1953	$ 6,087,046,185
1952	5,973,064,639
Taxes, nine months	
1953	$ 972,804,921
1952	909,278,663
Net railway operating income, nine months	
1953	$ 845,430,758
1952	735,326,363
Net income, estimated, nine months	
1953	$ 651,000,000
1952	532,000,000
Average price railroad stocks	
December 1, 1953	60.59
December 2, 1952	66.81
Carloadings revenue freight	
Forty-seven weeks, 1953	35,293,136
Forty-seven weeks, 1952	34,643,028
Average daily freight car surplus	
Wk. ended November 28, 1953	43,180
Wk. ended November 29, 1952	4,708
Average daily freight car shortage	
Wk. ended November 28, 1953	332
Wk. ended November 29, 1952	2,709
Freight cars delivered	
October 1953	8,727
October 1952	5,437
Freight cars on order	
November 1, 1953	35,171
November 1, 1952	90,708
Freight cars held for repairs	
November 1, 1953	94,758
November 1, 1952	94,843
Average number of railroad employees	
Mid-October 1953	1,214,656
Mid-October 1952	1,249,919

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Week at a Glance CONTINUED

around incentive? Would smaller cars cut turnaround time? 30

A diesel instruction car, built in company shops, is now being used by the Reading. 32

BRIEFS

Eastern railroads have requested a conference with transcontinental lines to discuss the question of divisions on all through overhead traffic, the conference to be held sometime after January 1.

An unusual safety honor was bestowed upon the Southern Pacific's Shasta division a few weeks ago, when, by proclamation, the city council of Dunsmuir, Cal., praised division employees and supervisory officers for their success in reducing personal injuries from a ratio of 12.32 in the first nine months of 1952 to a ratio of 7.70 in the same period this year. "Health and safety of Shasta division employees are of immediate concern to the city of Dunsmuir," said the proclamation.

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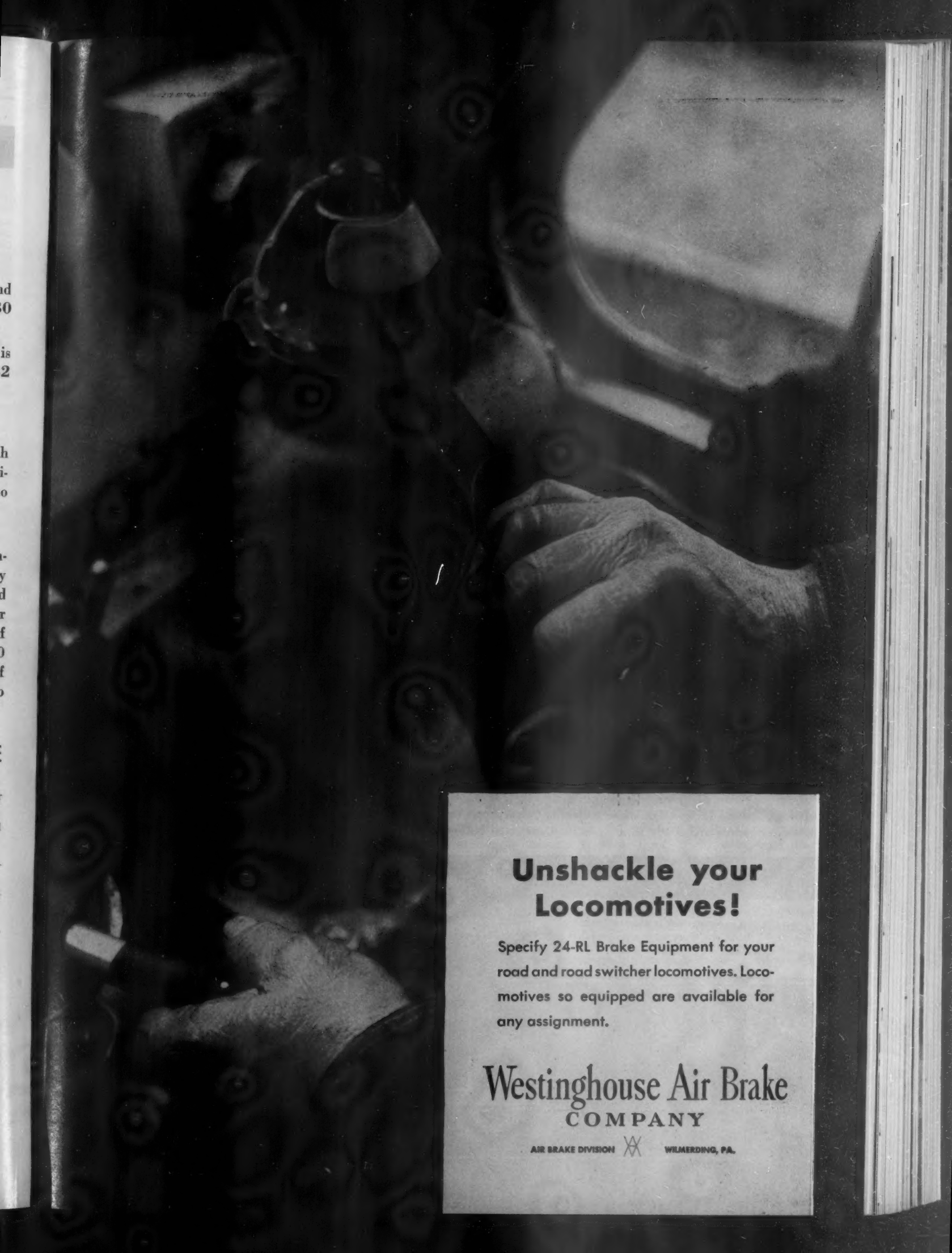

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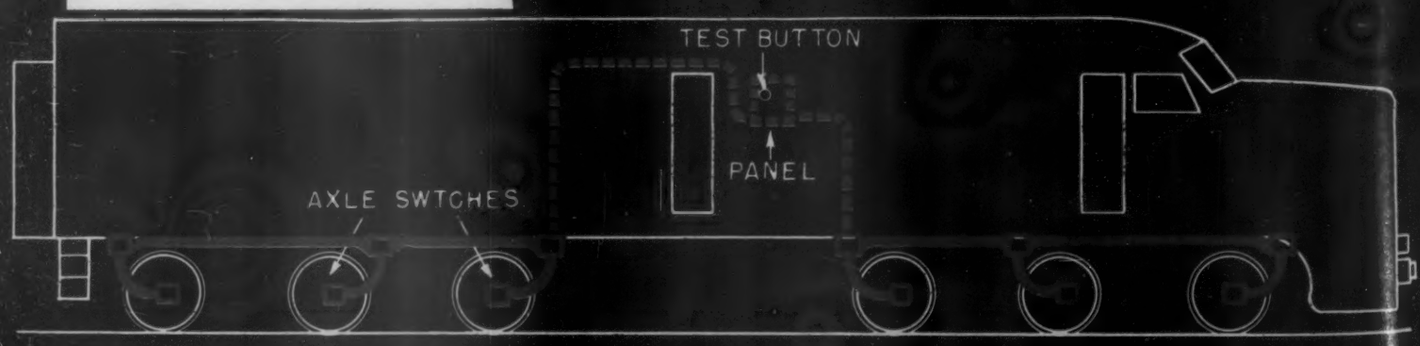
Installation arrangement is simple. Three encased wires run from each axle switch unit to the control panel in the cab.



The axle switch is easily installed at one end of each axle and is accessible for servicing.

SLIP-SLIDE

New General Electric system provides protection against costly and dangerous wheel slip and slide

Wheel slip and wheel slide on diesel-electric or electric locomotives can be more than a nuisance—they can also be dangerous and contribute to high maintenance.

Now, General Electric has built and tested an electric device that detects, indicates and initiates corrective action against wheel slip. In addition, it detects and indicates wheel slide and locked axles which can occur during any phase of locomotive operation.

The slip protective system, which includes a switch unit mounted at one end of each axle, goes into action when any axle (or axles)—for any reason—starts rotating at a different speed than the others. At this point, an unbalance of voltages occurs in the axle switch circuits.

In the case of slip, the device initiates a reduction of power application to the traction motors. In order to prevent a second wheel slip, there is a time lag before power is re-applied to the slipping wheel.

In the case of slide, which occurs during dynamic or air braking, the condition is indicated to the operator, but braking is not interrupted automatically. A slide caused by a locked axle is also detected and indicated instantly.

The new General Electric system is extremely sensitive, indicating and correcting slippage over the entire range of locomotive speeds. Completely automatic, it requires none of the engineer's time or attention. The equipment can be installed in any type of journal box. All axle switches have the same cover and axle spline as commonly used on journal-mounted, axle-driven, speed recording equipment. Long life is assured by the simple construction, no brushes, no commutators, few moving parts to wear.

For complete information about the General Electric protective slip system, contact your nearest G-E Apparatus Sales office, or write for GEA-5991, "Wheel-Slip Wheel-Slide System for Locomotives." General Electric Co., Schenectady 5, N. Y. 123-3

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Railroads Have "Plus Factors," Too

White tells investment bankers industry has "dynamic quality" and "potential growth"—Urges investors to take a "new look"—I.B.A. is less optimistic

Because there is a "dynamic quality in the railroad situation today which has gone generally unrecognized," and "potential growth in the industry," it is "important that investors and others take a new look" at the railroads, William White, president of the New York Central, told the Investment Bankers Association of America at Hollywood, Fla., December 3.

The railroads, Mr. White conceded, do have problems, because they "are regulated under the concept of monopoly"; because "Congress and state legislatures, as well as pressure groups, have been either unwilling or too slow to recognize the transition from monopoly to keen competition"; and because their competitors, though "long since weaned and grown to maturity," still have the advantage of public investment in highways, waterways, airways and airports.

It is necessary, he continued, for railroad spokesmen to call attention to these problems—"to repeat them over and over for emphasis in order to impress upon regulatory bodies and legislators the inequities that exist in national transportation policy." Such emphasis, he insisted, is not "an alarm to send investors running for cover . . . nor is it an appeal for sympathy," but rather "a public service to bring about a better public understanding, so that Congress and state legislatures will act and permit us the freedom to be enterprising."

The Positive Side—The bulk of Mr. White's address, however, was devoted to what he termed "the positive side of our business, about which too little is known."

There are, he said, "factors of progress and achievement, and also factors of the future, which when better known should dispel many of the preconceptions and prejudices which add up to 'depression thinking' about the railroads."

Among these he cited the industry's strengthened financial and physical condition; its "phenomenal" operating performance; improvements in track components and track maintenance, in signaling, and in all types of rolling stock; and the fact that "combined research energy expended on behalf of the railroads probably exceeds that of any other industry," with the entire railroad plant serving "as a transcontinental testing laboratory where investigation of new methods and materials never ceases."

This "progress and change," he continued, "has been evolutionary rather than revolutionary, except in the case of dieselization. Few of these accomplishments meet the eye and we railroad men do not talk about them enough, but they are paying off."

Competitive Pricing—"Something about which you will hear more in the future," the NYC president also told the investment bankers, "is research on competitive pricing, because in those fields where rail transportation holds the inherent advantage of efficiency, we're striking back to recover lost business. We are doing this with service and we are doing it with competitive pricing."

He added that, to the task of eliminating "idle investment" in equipment, "we are bringing the scientific approach of transportation research . . . the industrial engineering principle." This means, he said, "applying the same kind of precise analytical approach to our operating methods as we do to questions of technical design."

All this adds up, Mr. White concluded, to his own feeling that "greater and more general optimism" about the future of the railroads "not only is justified . . . but actually is required. A sort of defeatist pessimism has infected the fabric of public policy toward transportation. As a result, much official thinking starts out with the premise that the railroads have problems, and either stops right there or decides that it won't do any harm to give them a few more. . . . What I am urging is that sights be raised; that it become realized that the railroads are not a static industry; that they have a dynamic quality about them which offers opportunity for growth."

Bankers' Views—Because of Mr. White's speech, the annual report of the I.B.A.'s Railroad Securities Committee was limited to "recapitulation of the more important factors affecting railroad securities during the year 1953 and a summary appraisal of some

THIS "ATOMIC" EXPLOSION climaxed ground-breaking ceremonies at Philadelphia November 24 whereby construction was begun of Penn Center, a group of office buildings, stores, hotels and related facilities to be erected on Pennsylvania Railroad property left vacant by demolition of that road's Broad Street station and its "Chinese wall" approach.

potential developments during 1954."

The committee repeated its 1952 statement that, "Appraised in terms of return on railroad property investment or in terms of purchasing power, railroad earnings are still inadequate." Reported net income, it estimated, would be reduced by approximately $150 million if accelerated amortization charges for tax purposes could be deducted from income account.

The committee also called attention to the fact that "not all carriers are sharing equally in the relative level of prosperity. Those operating in the . . . Eastern region are hampered earnings-wise by many problems which do not confront carriers operating in other sections of the country. . . . The recent change in the basis of dividing rates . . . is only a minor contribution to the solution of the problem."

Outlook for 1954—"There is some tendency," the committee said, "to anticipate a slightly lower level of business activity in 1954 than prevailed during 1953. . . . We are of the opinion that a modest decline in railroad volume could be offset for the most part by additional operating economies and thus net earnings need not be seriously affected on this account.

"A more serious threat to railroad earnings is posed by demands of railroad labor unions for increased wage rates and other work benefits. . . ."

The report continued to urge that, "If further increases in rates are sought to offset higher costs of operation it would seem most desirable to get away from decisions granting temporary relief." It also pointed out that, in 1953, the railroad industry, "in contrast with most others, was not an important seeker of capital in our public security markets."

It added that, "The improved physical and financial position of the railroads is reassuring to investors in railroad bonds and has served to develop a greater degree of confidence in such securities"; but, it asserted, "Not the same degree of satisfaction exists among railroad equity owners. This group feels . . . that the dividend policies of railroad managements are unduly conservative."

Charles W. Bergmann, of the New York Stock Exchange firm of R. W. Pressprich & Co., is chairman of the I.B.A.'s Railroad Securities Committee.

Traffic

Three Carrier Problems

Methods and human engineering; revision of freight rate theories; and the "fast dollar" trucker, are cited by E. G. Plowman as "paramount problems"

E. Grosvenor Plowman, vice-president and general traffic manager of the United States Steel Corporation, outlined what he considers to be the three "paramount" problems of major American carriers in a talk before the Pacific Traffic Association at San Francisco. Mr. Plowman cited:

(1) "The basic concept that transportation concerns must be allowed —and even encouraged—to compete just like other industrial enterprises, carries with it the obvious corollary that both equipment and working procedures will constantly improve. This vital field of methods engineering and human engineering has received too little carrier attention. The possibility that industrial traffic managers can assist in working out improvements in transportation also remains virtually unexplored by carriers.

(2) "A problem child of private enterprise is the concern that seeks the 'fast dollar.' Transportation is not immune from this type of operator. A recent striking example is the trucker who offers lower rates, made possible by his violation of such laws as those defining safe load limits on his vehicles. My own company recognizes that we in industry have responsibility here. We will not knowingly encourage or condone such illegal practices.

(3) "The possibility that freight rate theories need revision in this new era of active competition between American carriers is receiving well-merited attention. Certainly the British experiment of complete railroad freedom would not seem to be the answer for us. The published American freight rate has too many valuable attributes —for example, honesty and fair play toward all shippers—to be discarded. Yet there must be found a middle ground of regulated and published freight rates designed for the new competitive times—something other than for the utility-type monopoly conditions of the railroad era that lasted until the motor truck, that is, until about 1925. Railroads compete today. They need better freight rate tools, as do those truck lines that follow railroad rates in publication of their own tariffs.

Not Gloomy—"American railroads and other common carrier transportation companies are welcome and effective partners with American private enterprise industry. Each needs the other. The future of the common carrier is not gloomy. Nationalization is not inevitable. Financial health will not disappear, provided only that we recognize the fundamental importance of free and active competition within and between transportation concerns," Mr. Plowman concluded.

Rates & Fares

I.C.C. Advised to Order Long Island Fare Rise

The Interstate Commerce Commission has been advised by Examiner Charles S. Gray to order the Long Island to increase commutation fares to a basis where they will raise the road's commutation revenue by 25 per cent.

The advice was embodied in Examiner Gray's proposed report in the case (No. 31120) which involves the Pennsylvania's complaint alleging that the LI intrastate commutation fares cause unjust discrimination against interstate commerce. The LI trustee, William Wyer, is defendant in the case, and interveners in opposition to the complaint included the Public Service Commission of New York.

The examiner would have the commission uphold the complainant's contention and then follow through to find that the unjust discrimination would be removed by establishment of the fare basis proposed in the complaint. The anticipated revenue yield would be $4,061.875 a year.

The PRR was identified in the report as owner of 94 per cent of the LI stock, holder of $39.9 million of LI bonds, and holder of claims against LI which total about $52 million. As to LI participation in the case, the proposed report had this to say:

"Defendant cross-examined two of complainant's three witnesses, but developed no vital defect in their evidence. No affirmative evidence was presented by defendant." (*Railway Age*, October 20, 1952, page 11.)

Intrastate Rates

The United States Supreme Court has upheld an Interstate Commerce Commission order requiring railroads in Tennessee to increase their intrastate rates on coal and wood to the interstate level. The court's action was an order affirming a lower-court ruling from which Tennessee had appealed. (*Railway Age*, September 8, page 65.)

In a case involving Indiana intrastate rates on bituminous coal, the I.C.C. has found that undue discrimination against interstate commerce results from the Public Service Commission of Indiana's failure to approve increases to the interstate level. The commission withheld issuance of an order pending advice from the Indiana commission as to whether or not it would approve the increases called for.

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended November 28, which included the Thanksgiving Day holiday, totaled 596,230 cars, the Association of American Railroads announced on December 3. This was a decrease of 129,502 cars, or 17.8 per cent, compared with the previous week; a decrease of 74,141 cars, or 11.1 per cent, compared with the corresponding week last year; and a decrease of 225,546 cars, or 27.4 per cent, compared with the equivalent 1951 week, which did not include the holiday.

Loadings of revenue freight for the week ended November 21 totaled 725,732 cars; the summary, compiled by Car Service Division, A. A. R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, November 21

District	1953	1952	1951
Eastern	120,536	137,118	118,408
Allegheny	144,528	159,838	144,807
Pocahontas	51,285	59,065	53,306
Southern	123,665	130,048	120,821
Northwestern	101,800	128,791	96,801
Central Western	122,095	132,690	117,419
Southwestern	61,823	63,523	59,885
Total Western Districts	285,718	325,004	274,105
Total All Roads	725,732	811,073	711,447
Commodities:			
Grain and grain products	47,825	50,728	49,349
Livestock	11,079	13,896	9,455
Coal	127,637	149,461	145,763
Coke	12,221	15,014	16,216
Forest products	44,088	45,755	39,063
Ore	45,662	73,047	45,209
Merchandise l.c.l.	66,596	73,674	63,424
Miscellaneous	370,624	389,498	342,968
November 21	725,732	811,073	711,447
November 14	727,058	828,750	814,258
November 7	747,868	829,295	791,403
October 31	780,863	862,116	837,617
October 24	804,413	760,773	864,800
Cumulative total 47 weeks	35,293,136	34,643,028	36,977,312

In Canada.—Carloadings for the seven-day period ended November 14 totaled 78,234 cars, compared with 79,485 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
November 14, 1953	78,234	31,144
November 14, 1952	85,005	33,174
Cumulative Totals		
November 14, 1953	3,521,317	1,433,009
November 14, 1952	3,645,588	1,528,800

Operations

Car Service Orders

Fifth Revised I.C.C. Service Order No. 95 has been modified by Amendment No. 2, which set back the expiration date from November 30 to June 30, 1954. The order makes D. W. Benton the commission's agent on matters relating to refrigerator cars.

Second Revised I.C.C. Service Order No. 872, which provides a permit system for controlling movements of grain to Gulf of Mexico and Pacific Northwest ports, has been modified by Amendment No. 3, which set back the expiration date from November 30 to April 30, 1954. Meanwhile, however, exemption arrangements applicable to Texas and Pacific Northwest ports have also been extended, so the order currently affects only grain movements to New Orleans, La., and Mobile, Ala.

B&M Sets Up Passenger Service Department

Creation of a separate passenger service department on the Boston & Maine has been announced by T. G. Sughrue, president. The department, created for an intensive review of the road's passenger services and also to reduce annual deficits from passenger operations, is headed by Vice-president Robert M. Edgar, who, Mr. Sughrue

NEW FOIL-LINED PACKAGE cuts need for refrigeration or ventilation of citrus fruit in transit or in storage. Its development may be a step in . . .

Making Perishables Easier to Handle

New packaging technique may revolutionize existing perishable shipment methods and practices

The expense and complications of shipping and storing fresh citrus fruits may be greatly simplified, and made less expensive and bothersome, through the use of aluminum foil-lined cardboard containers. This is a new technique being developed by the Reynolds Metals Company in cooperation with several western citrus grower groups.

Extensive tests indicate certain kinds of citrus fruit can be transported and stored at ordinary temperatures for periods of from 30 to 60 days, or more, without loss of weight, appearance, quality or flavor. The tissue wrappers normally used on citrus fruits were found to be unnecessary. The tests also revealed — quite unexpectedly — that grapefruit stored in the foil-lined containers at temperatures ranging from 70 to 90 degrees Fahrenheit, actually kept better than when refrigerated. Further, it was found that they deteriorated much more slowly after removal from the container than grapefruit stored under refrigeration. This holds promise of opening extended markets for fresh citrus fruits because ordinarily they are not purchased in large quantities by the retailer—and hence are not actively pushed—because of their perishable nature, and because of the necessity for using valuable refrigerated storage space.

If the initial findings are borne out by continued use, it is quite possible the new containers will result in a major change in present methods of shipping, storing and marketing several different kinds of citrus fruits. And later experimentation may extend these benefits to other fruits and perhaps to some vegetables. One result will probably be a call for fewer, but larger and heavier carload shipments.

Further, if refrigeration requirements are no longer necessary, much of this traffic still remaining on the rails may become highly vulnerable to truck competition with present rail rates prevailing.

said, will have complete authority to set up an organization to handle traffic, sales and operations.

"There must be a way to reduce substantially, if not completely eliminate, the annual deficit from passenger operations, which has approximated $12,000,000 a year since the war," Mr. Sughrue added. "We believe that way is to improve our service in those areas where it is needed and used, or where a potential for increased use exists, just as much as it is necessary to curtail or eliminate services operated at losses in areas where current use is slight and no potential for growth exists."

PRR Group Aims at More Efficient Freight Service

Appointment of a Terminal Committee to study and implement plans and procedures to quicken freight movement through yards and terminals and generally to increase efficiency of its freight service, has been announced by the Pennsylvania. The committee is headed by Jacob D. Fuchs (see Railway Officers columns), formerly the PRR's general superintendent of transportation at Chicago.

NYC Sets Up Industrial Engineering Office

The New York Central has created an industrial engineering office "to broaden the application of mass production techniques in the rendering of mass transportation service." The office, headed by Andrew B. Pulliam, who has been appointed to the new position of chief industrial engineer, will function as part of the management services organization established in connection with streamlining the Central's operating department, according to Karl A. Borntrager, vice-president, operations and maintenance.

"Among projects to be undertaken by the industrial engineering staff," Mr. Borntrager added, "will be the study of layout, work flow and general methods in our shops; at engine and car work points; in freight stations and offices; and in track, bridge and building programs. The engineers also will seek ways of bettering operating performance at terminals, yards and stations.

"Briefly, the purpose is to provide technical direction which can improve efficiency or service and decrease costs."

Competitive Transport

Clerks Sour on "Piggyback"?

Railroads should fight to gain business for themselves, not for truckers, says union publication—"Background" article sees job peril, too

"What Piggy . . . And Whose Back?," is the title of a feature-length article appearing in the November 15 "Railway Clerk"—official weekly publication of the Brotherhood of Railway and Steamship Clerks, Freight Handlers and Station Employees. The article reveals for the first time the union's thinking on details of "piggyback" (haulage of highway trailers on railway flat cars).

While ostensibly a "background" article to acquaint the union's membership with the concept of trailers-on-flat cars and current pros and cons, the piece winds up sounding more like an editorial. It leads off with a hint hat railroad jobs might be placed in jeopardy:

"At first glance, it may appear that the piggyback idea is strictly a management headache; however, freight handlers and platform workers would not be the only railroad employees adversely affected if the trailer-by-rail scheme really gets rolling. It would reduce the volume of general office work, involving rate clerks, car record employees and a number of other railroad clerical jobs."

Then, following in the footsteps of W. P. Kennedy, chief of the Brotherhood of Railroad Trainmen (*Railway Age*, July 27, page 11), the article launches into a goading of railroad management. Unlike Mr. Kennedy, however, the clerks feel that the railroad industry should not promote piggyback to the benefit of the truckers. They want the railroads to handle the whole business. Here's how the article puts it:

What Sort of "Marriage"?—"The 'piggyback' idea has been called a 'marriage of convenience' between truckers and railroads, but it has the seeds of danger for the railroads by allowing the truckers to establish an ironclad monopoly on all less-carload traffic. Perhaps the only marriage which should take place between railroads and truckers is for each to do a better job of handling their own business. If the truckers found that it costs too much to pay taxes for the use of public roads, then railroads should use that fact to show the public that small truck units simply cannot operate as cheaply or efficiently as full-length railroad trains. That many communities have been deprived of rail service ought to be a signal for railroad management to install fleets of feeder trucks for assembling shipments at the nearest railroad terminal. Loading highway trailers is not much cheaper than loading box cars, and both have to be unloaded before delivery to the consignee.

"And while most railroads 'await developments' on 'piggyback,' it is hoped that some pioneer spirit among top railroad management will smash his fist upon the desk and decide to go out and get business instead of handing it over to the trucks. That same leader should point out that various forms of truck-train schemes have been tried and flopped during the past quarter-century; that spending thousands of dollars for special cars and terminals to help the competition move freight makes about as much sense as seeing a bank tear up all mortgages.

"Guts"—Not "Gimmicks"—"As the 'piggyback' controversy continues, it may be well for a good many railroad managers to take a firm grip on themselves and admit that railroads may be first as a defense need, but they are certainly lagging on the ability to go out and get traffic through salesmanship, streamlining, and sensible admission that some railroad business tactics are pretty cobwebby. The railroads are largely responsible for growth of truck competition, but why make the railroad business a subsidiary of the trucking business. We don't need gimmicks, we need guts."

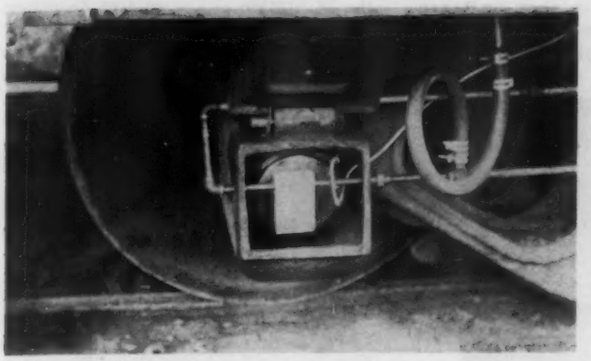
Truck Trip-Leasing Ban Postponed Another Year

Trip-leasing of trucks can continue until March 1, 1955, as a result of the latest postponement granted by the Interstate Commerce Commission.

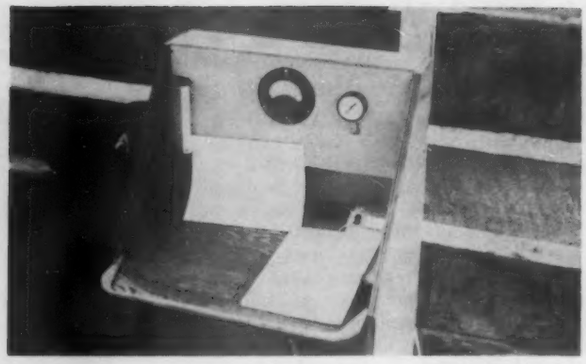
The commission rule banning trip-leasing had previously been scheduled to become effective next March 1. The new delay puts the effective date somewhat beyond the final adjournment of the present Congress which has before it a bill, H.R. 3203, to end the commission's authority to prohibit trip-leasing.

When it extended the reprieve, the commission also reopened the trip-leasing case for further hearing on the ban (which is a rule stipulating that the term of a lease "shall be not less than 30 days"), and on another controversial rule which prohibits rental payments of the revenue-splitting type.

Broader Exemption—A third commission order rewrote the exemption provisions of the trip-lease-ban rule to make them more liberal. The new version excludes permanently from the ban all so-called "farm trucks" when



MAKESHIFT PIPING for testing hot box detector on the Louisiana Midland.



THE TEST PANEL in the car had a pyrometer, thermometer and air gage.

LOUISIANA MIDLAND TESTS HOT BOX DETECTOR

A detecting device which automatically stops a train in the event of a hot box was road tested recently on the Louisiana Midland. The device, developed and patented by A. J. Hebert of the SP at Lafayette, La., is tied into the brake pipe and causes the train brakes to apply when the journal reaches a predetermined temperature at which a fuse melts (see *Railway Age*, February 9, page 84).

Detectors were installed on four bearings (R-3, R-4, L-3 and L-4) on an empty flat car. The bearings were thoroughly cleaned of lubricant and run dry to create hot boxes. Thermocouples were placed in the bearings and connected to a dial pyrometer which was located within the car to observe functioning of each bearing.

The test car was attached to a work extra with a consist of 22 empties and one load. Speed during the test was 35-40 m.p.h.; temperature 88-90 deg. F. As each of the four dry bearings approached a dangerous temperature, the detector brought the train to an emergency stop (it can be set to stop the train by either emergency or service application).

The first bearing to run warm was R-4. The detector stopped the train when the bearing reached 330 deg. and the axle 375 deg. The box was repacked and oiled, the detector fuse renewed, and the test continued to overheat the remaining dry bearings. Journal temperatures at which the detector stopped the train in these three cases were 370, 330 and 340 deg. Corresponding axle temperatures were 400, 390 and 390 deg. The time required to change the detector fuse averaged less than 30 seconds.

Inspection after each stop showed that the detector stopped the train before damage occurred to the journal or bearing.

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they are trip-leased for journeys home from points to which they have hauled agricultural commodities.

Thus the exemption in the rules becomes as broad as the Interstate Commerce Act's so-called agricultural exemption. Previously, it had been narrower, applying only to farmer-owned trucks and trucks owned by farm cooperatives, while other trucks carrying agricultural commodities would have got only 60 days after the effective date of the rules to get back home on a trip-lease basis.

It is section 207.4(a)(3) of the leasing rules that was involved in the rewriting. The rewriting cancelled subdivision (ii) of the section and made subdivision (i) read as follows:

(i) That equipment specified in section 203(b)(4a), (5) and (6) of the act [which contains the agricultural exemptions] may be utilized by authorized carriers under contracts, leases or other arrangements applying for any period, upon completion of a movement in which such equipment is exempt from regulation by the commission except as to qualifications and maximum hours of service of employees and safety of operations and standards of equipment, and is next being utilized by the authorized carrier in a loaded movement in any direction or in one of a series of loaded movements over reasonably direct routes in the direction of the general area in which the exempt movement originated, or in the direction of the area in which the equipment is based; provided the authorized carrier receives, prior to the execution of the lease, a statement signed by the owner of the equipment, or someone duly authorized to sign for the owner, authorizing the driver to lease the equipment for the return movement or movements, and a statement signed by the driver specifying the origin, destination, and the time of the beginning and ending of the last exempt movement.

I.C.C. Upheld on Pruning Of Temporary Truck Rights

The United States Supreme Court has upheld an Interstate Commerce Commission ruling that temporary trucking rights suffer proportionate shrinkage when there is a curtailment of the basic "permanent" rights to which they are tied.

The effect of the court's ruling will be to take Riss & Co. out of the business of transporting explosives on important routes, principally those to and from Hingham, Mass., Edgewater, Md., and Radford, Va. The ruling, announced November 30, without a written opinion, affirmed a lower-court decision which upheld the I.C.C.

The I.C.C. determination in issue was embodied in June 2, 1952, report in No. MC-200 (Sub-No. 60TA). The commission interpreted a temporary authority held by Riss. As originally issued, that authority permitted Riss to transport explosives on routes over which grandfather-clause rights to transport "general commodities" were claimed by it in a then-pending proceeding (No. MC-30077).

In deciding the grandfather-clause case, the commission did not grant all rights Riss claimed, but the trucker did not make a corresponding change in services performed under the temporary explosives rights. Such a change is now reuired by the commission ruling which the Supreme Court upheld. (*Railway Age*, June 16, 1952, page 16.)

Air Mail Will Seek Lowest Air Line Rates

The Post Office Department has advised air carriers that it will institute on January 1, 1954, a new "mail routing policy" under which it will "use the carrier assessing the lowest air transportation charges authorized by the Civil Aeronautics Board for air mail transportation."

Under the present set-up of air-mail pay, the so-called "service rates" which are paid by the Post Office Department (subsidy payments awarded by C.A.B. being in addition) may differ as between air lines on the same route.

Labor & Wages

Aliquippa & Southern Strike Settled

A two-week-old strike of 650 employees of the Aliquippa & Southern ended November 30 when the company and the three unions involved agreed to new contract terms.

Under the terms, employees represented by the Brotherhood of Railroad Trainmen, the Brotherhood of Locomotive Firemen & Enginemen, and the United Railroad Workers of America, C.I.O., will receive an increase of 8½ cents an hour, retroactive to November 1. The agreement also calls for a change in the base point of the cost-of-living index from 113 to 114.2.

The labor organizations struck November 16 to enforce demands for 40 cents an hour; longer vacations; shift differentials; paid holidays; and other fringe benefits.

Organizations

Sillcox Heads A.S.M.E.

Dr. Lewis K. Sillcox, honorary vice-chairman of the board of the New York Air Brake Company, was elected president of the American Society of Mechanical Engineers for 1954 during the society's 74th annual meeting, held last week at New York.

Born at Germantown, Pa., in 1886, Dr. Sillcox has been identified with the transportation industry since he began his career in 1903 as railroad foundry apprentice. From 1918 to 1927 he was

Dr. Lewis K. Sillcox

general superintendent motive power of the Chicago, Milwaukee & St. Paul, becoming first vice-president of New York Air Brake in the latter year. In 1948 he was elected a director of that company; in 1949, executive vice-president; in 1952, vice-chairman of the board; and, in June of this year, honorary vice-chairman. From 1934 to 1936 he was chairman of the Mechanical Advisory Committee to the Federal Coordinator of Transportation.

Dr. Sillcox, who has been instrumental in many developments in railroad air-brake equipment and usage, has been a contributor to many technical publications, and a lecturer on transportation and economics at a number of the country's leading universities. He holds the gold medal of the Institution of Locomotive Engineers of Great Britain (1945).

He is a Fellow of the A.S.M.E., to which he has belonged since 1916. In 1943 he was awarded the A.S.M.E. medal for distinguished service in engineering and science; and in 1946 was elected an honorary member of the society.

The second annual forum meeting of the **Great Lakes Regional Advisory Board,** in cooperation with the **Cleveland Chamber of Commerce** and the **Traffic Club of Cleveland,** will be held in the Hotel Cleveland, Cleveland, Ohio, December 8. The topic for the forum session is, "Why Is the Railroads' Share of Available Freight Tonnage Steadily Decreasing, and What Are the Railroads Doing About It?," with Dr. John M. Gersting, professor of economics, John Carroll University, as moderator. The discussion panel will be made up of J. H. Wilharm, general traffic manager, Diamond Alkali Company; M. G. McInnes, vice-president, Erie; A. E. Whiteside, traffic manager, Harshaw Chemical Company; and J. J. Fitzpatrick, assistant vice-president, Nickel Plate.

Equipment & Supplies

O.D.M. Will Not Curtail Diesel, Freight Car Goals

Defense expansion "goals" for freight cars and diesel locomotives have been left intact, following a study of the tax-amortization program by the Office of Defense Mobilization.

O.D.M. said last week that expansion of the freight car and diesel fleets "is not adeuate for defense purposes," and the agency will continue to allow accelerated tax amortization until defense needs are met.

The diesel and freight car expansion "goals" were established during the post-Korea defense program. O.D.M. reported last week that it has approved fast write-off certificates accounting for about 69 per cent of the freight car "goal," and about 61 per cent of the diesel "goal."

The defense expansion program for diesels called for the production of 15,500 units between January 1, 1950, and July 1, 1954. The freight car program aimed at the production of 10,000 cars monthly.

Meanwhile, O.D.M. has suspended the granting of fast write-off certificates in another railroad category—terminal and road facilities. This "goal" called for total expansion of $500,000,000, and O.D.M. said last week it is now trying to determine whether expansion to date has been adequate. No additional accelerated amortization will be granted, pending that determination.

TANK CAR AARX-1, which will be used by the Mechanical Division and the Freight Loading and Container Section of the Association of American Railroads in making impact tests at the Research Center, Chicago. This car has been given to the A.A.R. by the Union Tank Car Company, the presentation being made by Vice-president R. M. Smith (center). V. R. Hawthorne, executive vice-chairman of the Mechanical Division, is at the right; W. M. Keller, director mechanical research, at the left.

DOMESTIC EQUIPMENT ORDERS REPORTED IN NOVEMBER

LOCOMOTIVES

Purchaser	No.	Type	Issue Reported	Builder
FtDDM&S	3	600-hp.	Nov. 23	General Electric
L&N	46	1,600-hp. Gen. Purpose	Nov. 16	American Locomotive
	2	1,600-hp. Freight	Nov. 16	American Locomotive
	7	1,750-hp. Gen. Purpose	Nov. 16	Electro-Motive

FREIGHT CARS

CRI&P	1	125-ton Flat	Nov. 23	R.R. Shops
Erie	10	50-ton Box	Nov. 16	Pullman-Standard
NYNH&H	3	200-ton Transformer	Nov. 16	R.R. Shops
PRR	20	50-ton Box	Nov. 23	Pullman-Standard
StL-SF	600	50-ton Box	Nov. 16	Pullman-Standard

PASSENGER CARS

FEC	4	Coach	Nov. 16	Pullman-Standard
	2	Sleeping	Nov. 16	Pullman-Standard
NP	2	Sleeping	Nov. 16	Pullman-Standard

Domestic Equipment Orders Reported in November

Domestic orders for 58 diesel units, 634 freight cars and eight passenger cars were reported by individual purchaser in *Railway Age* in November. Estimated cost of the diesel units is $8,705,000; of the freight cars, $4,708,000; and of the passenger cars, $1,520,480. An accompanying table lists the orders in detail.

During the first 11 months of 1953, *Railway Age* has reported orders by individual purchaser for 1,048 diesel units costing an estimated $166,087,000; 22,076 freight cars costing an estimated $152,645,000; and 199 passenger cars costing an estimated $33,854,484.

LOCOMOTIVES

The **Milwaukee** has ordered 65 diesel units costing an estimated $9,574,306 (see Securities column elsewhere in this issue). The order was placed as follows: Electro-Motive Division of General Motors Corporation—19 1,750-hp. road-switchers, six 1,750-hp. "A" freight units, and six 1,200-hp. switchers; American Locomotive Company—eight 1,600-hp. road-switchers and five 1,000-hp. switchers; Fairbanks, Morse & Co.—eight 1,600-hp. road-switchers and five 1,200-hp. switchers; Baldwin-Lima-Hamilton Corporation—eight 1,200-hp. switchers.

The **Southern Pacific** is ordering 79 diesel freight units at an approximate cost of $16 million. Builders from which they will be ordered were not revealed. Included will be 57 1,750-hp., 16 2,400-hp. and six 1,200-hp. units. First 10 of the units are expected to be delivered this month, and the others before next August.

SIGNALING

The Electro-Motive Division of General Motors Corporation has ordered equipment from the General Railway Signal Company for installation of 27 sets of intermittent-inductive train control equipment on **Baltimore & Ohio** locomotives.

New Facilities

Canton.—A new ship unloading tower specially designed for discharging bulk materials weighing up to 200 lb. per cubic foot, and sized from granular to 12-in. lumps, has been placed in service at this road's ore pier in the port of Baltimore. In conjunction with a conveyor belt system completed last year, the new tower has increased the capacity of the ore pier from 2,000,000 to 5,000,000 tons annually. (An illustrated feature story about the pier was published in *Railway Age*, December 15, 1952, page 52.) The new unloader was designed and built by Heyl & Patterson, Inc., of Pittsburgh, in close cooperation with W. T. Brooks, chief engineer of the Canton, and H. E. Hildt, superintendent of the Cottman Company, which operates the pier. Electrical equipment was supplied by the General Electric Company.

Quebec, North Shore & Labrador.—The Iron Ore Company of Canada has ordered equipment from the General Railway Signal Company for installation of car retarders in QNS&L yards at Seven Islands, Que.

Financial

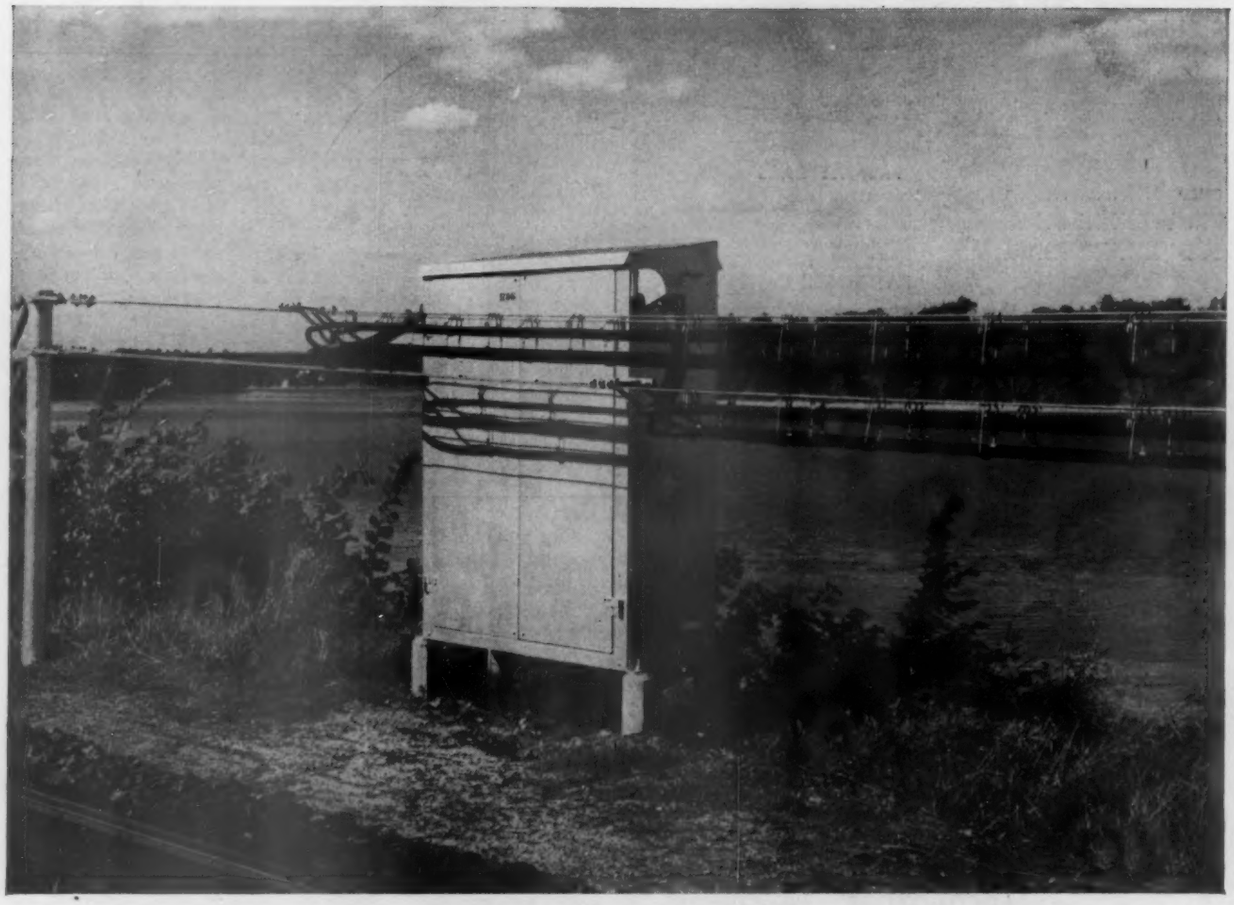
Boston & Maine.—*Acquisition of Northern Railroad.* — This road has applied to the I.C.C. for authority to acquire control of the Northern Railroad, a 69-mile line extending from Concord, N.H., to White River Junction, Vt. The B&M operates the Northern under lease and already owns approximately 45 per cent of the outstanding stock. It proposes to acquire additional shares from time to time, but does not plan to make a general purchase offer.

Lehigh Valley.—*Dividend on Capital Stock.*—A dividend of 30 cents a capital share has been declared, payable next January 20 to stockholders of record January 11. C. A. Major, LV president, said that, subject to continuance of earnings, it is the expectation that dividend payments will be made quarterly. In 1949 the LV purchased and cancelled the balance of its preferred stock, so there is presently outstanding a single issue of 1,497,050 shares of capital stock of no par value. The dividend just declared will be the first payment in over 20 years to owners of the property. The previous dividend was a quarterly payment of 62½ cents.

New York, Chicago & St. Louis.—*Use of Lackawanna Station at Buffalo, N.Y.*—Division 4 of the I.C.C. has approved an agreement covering use of the Delaware, Lackawanna & Western's passenger station and adjoining tracks at Buffalo. The new agreement provides for an increase of $30,000 in basic rental charges, and continues the joint-use arrangement through February 1954. The Nickel Plate has used the Lackawanna Station since 1917 and currently operates four passenger trains daily in and out of the Buffalo station (*Railway Age*, August 17, page 23).

(*Continued on page 34*)

NEARLY A THOUSAND PERSONS, despite inclement weather, visited this special exhibition train, composed of Monon and Erie passenger, freight and work equipment, when the two roads recently dedicated a new passenger station at Hammond, Ind.



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When you install G-E Flamenol* railway signal cable you'll discover it costs less to maintain than most other cables. For example, Flamenol cable does not require painting to protect it from the weather—so cable-painting costs are eliminated. This saving alone can pay for the cable in just a few years.

But this one saving is minor when compared with all the other advantages Flamenol cable can give you. Flamenol cable will not support combustion. It is not affected by sun, water, soil acids, ozone, oils, chemical fumes, and many other conditions that cause rubber-type insulations to deteriorate. This means you can expect Flamenol cable to deliver an exceptionally long, maintenance-free service life. And it offers better protection for your signal circuits than has been available to you in the past.

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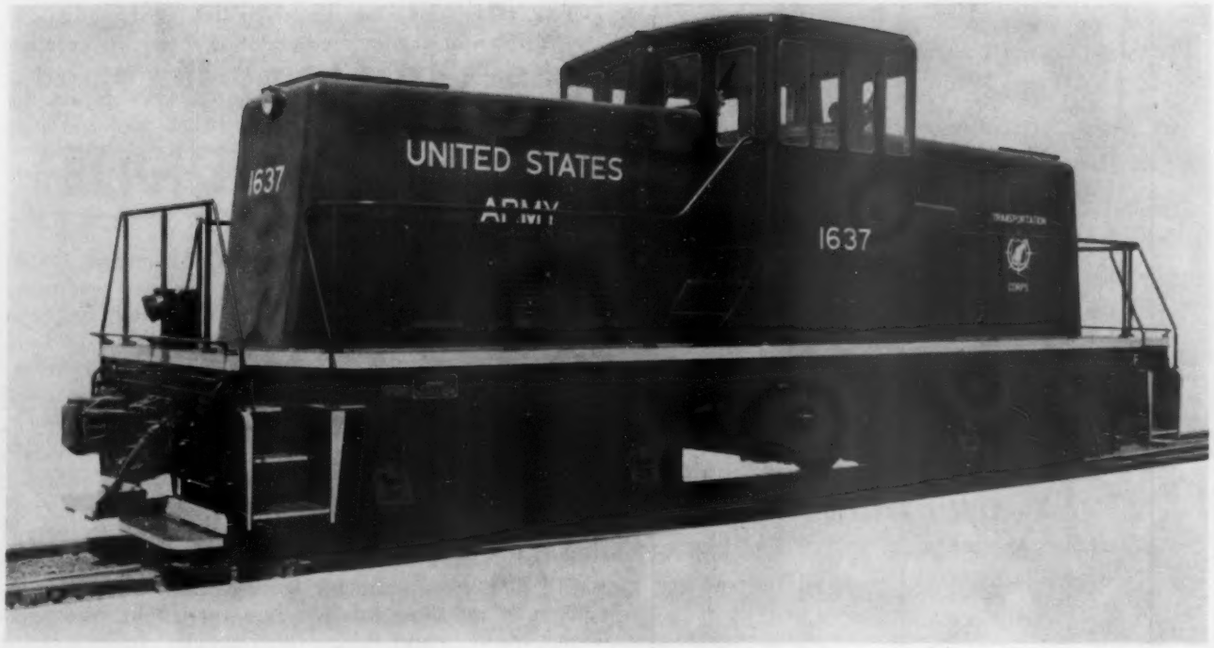


TYPICAL 80-TON locomotive furnished the Transportation Corps.

These Army Diesels Are Versatile

Diesel-electric locomotives which are essentially standard 80-ton switching units have been, by means of minor changes, made to suit a wide variety of military requirements

By A. J. BROADFOOT
Locomotive and Car Equipment Department,
General Electric Company,
Erie, Pa.

The past two world wars have taught the United States that the nation's existence depends upon ability to transport men and materials swiftly in almost any part of the world. Rail transportation, which carries a great share of this burden, has been speeded up in recent years by the adoption of the diesel-electric locomotive. Manufacturing plants have kept their end of the rail life line in step with this progress by the use of diesel-electric industrial switchers.

Locomotives for the Transportation Corps must meet a great variety of service requirements and at the same time a high degree of standardization is of first importance. The General Electric Company was called upon by the U. S. Army to assist in the transportation field and it was found that the standard line of switching locomotives developed over the past 15 years was basically suited to the government requirements. When necessary, minor alterations are made to meet specific conditions.

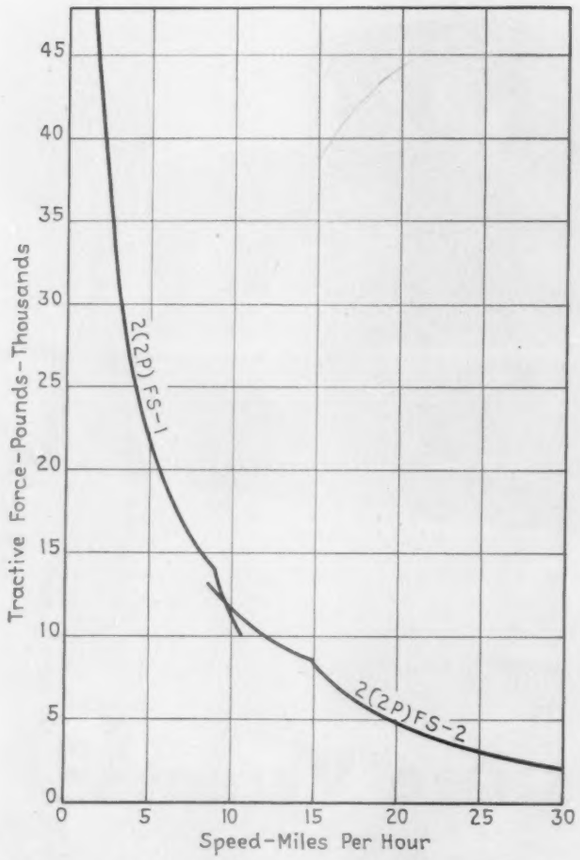
Two interesting modifications were introduced to permit some of these locomotives to operate in other parts of the world. Where operation on narrow-gage track was required, the wheels were pressed further onto the axles and the brake rigging shifted accordingly. When foreign couplers had to be used, the standard locomotive and frames were easily adapted to receive them.

Limited clearances at buildings or loading platforms and the necessity of operating on short radius curves required modifications of the locomotive cab and frame. Air or electric dumping equipment is supplied for many coal or coke handling operations. A number of industrial plants have adopted 2-way radio communication. Equipment for installing this on the locomotives includes a separate 6- or 12-volt power supply. Two operating stations are supplied on locomotives to be used where cars are constantly being spotted to loading platforms on either side of the track.

Standard Design Saved Time, Money

The use of essentially standard locomotives avoided the delay involved in creating new designs, and saved many thousands of dollars that would otherwise have been spent in development. It also permitted manufacturing time and cost to be held to a minimum. Moreover, the interchangeability resulting from the use of standard designs increases the reliability of operation and simplifies the handling of renewal parts.

An excellent example of the ingenuity displayed in



LOCOMOTIVE speed-tractive force characteristics.

producing these locomotives is found in the 50 80-ton units recently delivered to the Transportation Corps. These are essentially the standard industrial switcher type, having the following principal specifications:

Wheel arrangement	B-B
Track gage, in.	56½
Length inside knuckles, ft. in.	36-10
Height overall, ft. in.	13-6¾
Width overall, ft. in	9-6
Length between truck centers, ft. in.	19-2
Truck wheelbase, ft. in.	6-10
Wheel diameter, in.	33
Coupler height, in.	34½
Minimum curve, locomotive alone, ft.	75

Two Diesel Engines

The locomotive is equipped with two diesel-electric power plants. Each consists of a Cummins NHBIS 275-hp., 2,100-rpm., 6-cylinder, in-line, 4-stroke cycle, supercharged diesel engine direct connected to a General Electric type GT-569, 6-pole, self-separately excited, d.c. generator. The engine delivers 210 hp. to the generator for traction. Each generator furnishes power to two GE-747 4-pole, d.c. traction motors mounted in one of the locomotive trucks. These motors drive the axles through double-reduction gearing with an overall ratio of 14.96 to 1. The high-speed reduction is a right-angle drive with hypoid gearing. The low-speed reduction is spur gearing. This arrangement keeps noise and vibration at a low level.

The starting tractive force at 30 per cent adhesion is 48,000 lb. The maximum locomotive speed is 30 m.p.h.

A 750-watt auxiliary generator is direct driven from each engine by a flexible coupling. These supply power to separately excite the generator fields, operate the control circuits, and charge the 16-cell lead-acid type battery.

Special Requirements Fulfilled

Minor changes to the standard twin-engine, 80-ton locomotive were introduced where necessary to meet the special requirements of the Transportation Corps. Since multiple-unit control was required on all 50 locomotives, the regular design was modified slightly to incorporate an electropneumatic throttle operator in place of the mechanical throttle regularly used. This electrically controlled throttle enables one engineer to control two locomotives from the operating station on either of them.

A shut-down cylinder was also added to permit the engineer to shut down all engines, when operating in multiple-unit, without leaving his station. Control circuits for these functions are carried between locomotives by jumper cables. Other circuits carried between locomotives in these jumpers include those which control the reverser, sanders, headlights and normal engine shut down.

The engines are protected by an automatic alarm which sounds a warning if the cooling water temperature of any engine becomes dangerously high, or if an engine is shut down for any reason. Automatic engine shut-down in case of low lubricating oil pressure is also incorporated in the control. Air compressors on all power plants are synchronized electrically. The 14 EL air brake system is so arranged that, in multiple-unit operation, brakes are applied to both locomotives in case of a brake application. Air reservoir and distributing valve pressures are also equalized between locomotives.

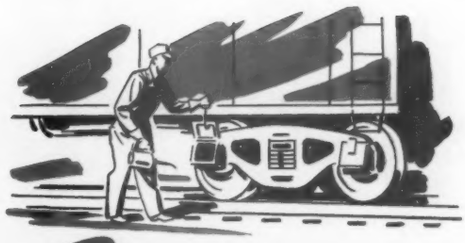
Manufacture and Assembly

Manufacturing methods were planned and coordinated to accelerate production and furnish these locomotives without undue delay to civilian orders. The platforms, cab structures, trucks, motors, generators and control equipment were manufactured at the Erie works of the General Electric Company. Other parts, such as the diesel engines and air brake equipment, were shipped in from the builders. All components were delivered to the final assembly building. Here subassemblies, such as power plants, control compartments, trucks, etc. were made up. Air, fuel, lubricating oil and water piping were installed in the platform. The locomotive took definite shape when the equipment was mounted on the platform and the cab and engine hoods put in place. The completed locomotive superstructure was lowered into place on the trucks, and hand-rails and couplers added.

A transfer table carried the completed locomotive to the test floor. Here special arrangements were made to completely test the locomotive indoors. The power plants were loaded and the throttle and generator fields adjusted to bring the horsepower output curve within previously established limits. Operation of every part of the locomotive was carefully checked. Then it went to the paint shop for final finishing before shipment.

Some interesting *facts* about

FREIGHT CAR SERVICING



and

LOW-COST SOLID BEARINGS

How much time is given to train inspections . . . to what extent journal bearings are involved . . . what the present cost is—in man-hours and materials . . . and how better maintenance and available developments can further improve efficiency

FREIGHT CARS spend about 9 hours a day in yard movements—interchange between roads, classification, and switching to loading and unloading tracks. But according to reliable information the average train is held only 30 minutes or less for car servicing and inspection. *That's less than 6% of the yard moving time—and far less of the total time in movement or subject to movement.*

You couldn't eliminate this inspection—even if bearings were no concern at all. It includes too much other equipment—brake hoses and rigging, wheels, couplers, air valves, door seals, and many other items in addition to journal bearings. It takes an appreciable amount of time just to walk the cut of cars. So even though it takes some man-hours to inspect the bearings, chances are in the vast majority of cases this bearing inspection affects departure times scarcely at all . . . certainly hardly any more than would be the case with any other type of bearing.

What do these man-hours cost? Well, based on the number of packers and oilers required by one railroad, whose miles per hot box for 1952 was 3 times better than the national average, the annual cost per car owned for this labor is only about 3% of the cost of installing expensive non-standard bearings. That includes the labor for repacks, too. In fact, total cost per car owned per year for all labor *and materials* needed for routine solid bearing maintenance comes to less than the annual interest and depreciation on the huge investment necessary for non-standard bearings. So, when you take the high costs of periodic disassembly and inspection of non-standard bearings into consideration, it's obvious that solid bearings are by far the better buy.

How to Lick Hot Boxes and Cut Inspection Time

You can lick hot boxes best with low-cost solid bearing designs. Here are just three available improvements—each designed to increase bearing mileage and each adaptable to existing equipment:

1. ***Low-cost heat resistant Satco lining metal***—Has a melting point 150° higher than standard babbitt, particularly advantageous in summer, but helpful all year round, too.

2. ***Twinplex Alarm Bearings***—Give smoke and odor indications should abnormal temperatures be reached, help detect failures before they become serious.

3. ***Magnus R-S Journal Stops and Packing Retainers***—Eliminate excessive axle displacement that causes waste grabs and spread linings. Keep the packing in place too—cut down man-hours for journal box servicing.

Combine these improvements with a program to upgrade maintenance standards and hot boxes will virtually disappear. And, of course, then you still retain all the inherent advantages of low-cost solid bearings.

Be sure to get your free copy of the "FACTS." Just write to Magnus Metal Corporation, 111 Broadway, New York 6; or 80 E. Jackson Blvd., Chicago 4.

MAGNUS

Solid Bearings

Right for Railroads
...in performance...in cost

MAGNUS METAL CORPORATION *Subsidiary of* **NATIONAL LEAD COMPANY**

An ace up yours

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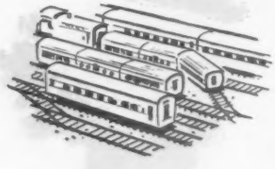
Reversibility.

Specially designed gears, making the ACF Talgo fully reversible, have been in daily operation on the ACF Talgo for more than a year.



Interchangeability.

Multi-unit cars, equipped with conventional ends and couplings, make interchange as easy and fast as with any equipment now in use.

Adaptability.

The ACF Talgo has as much room *inside* as any conventional train.. more than some. It can be fitted with any interior arrangements now in use.

ur sleeve!

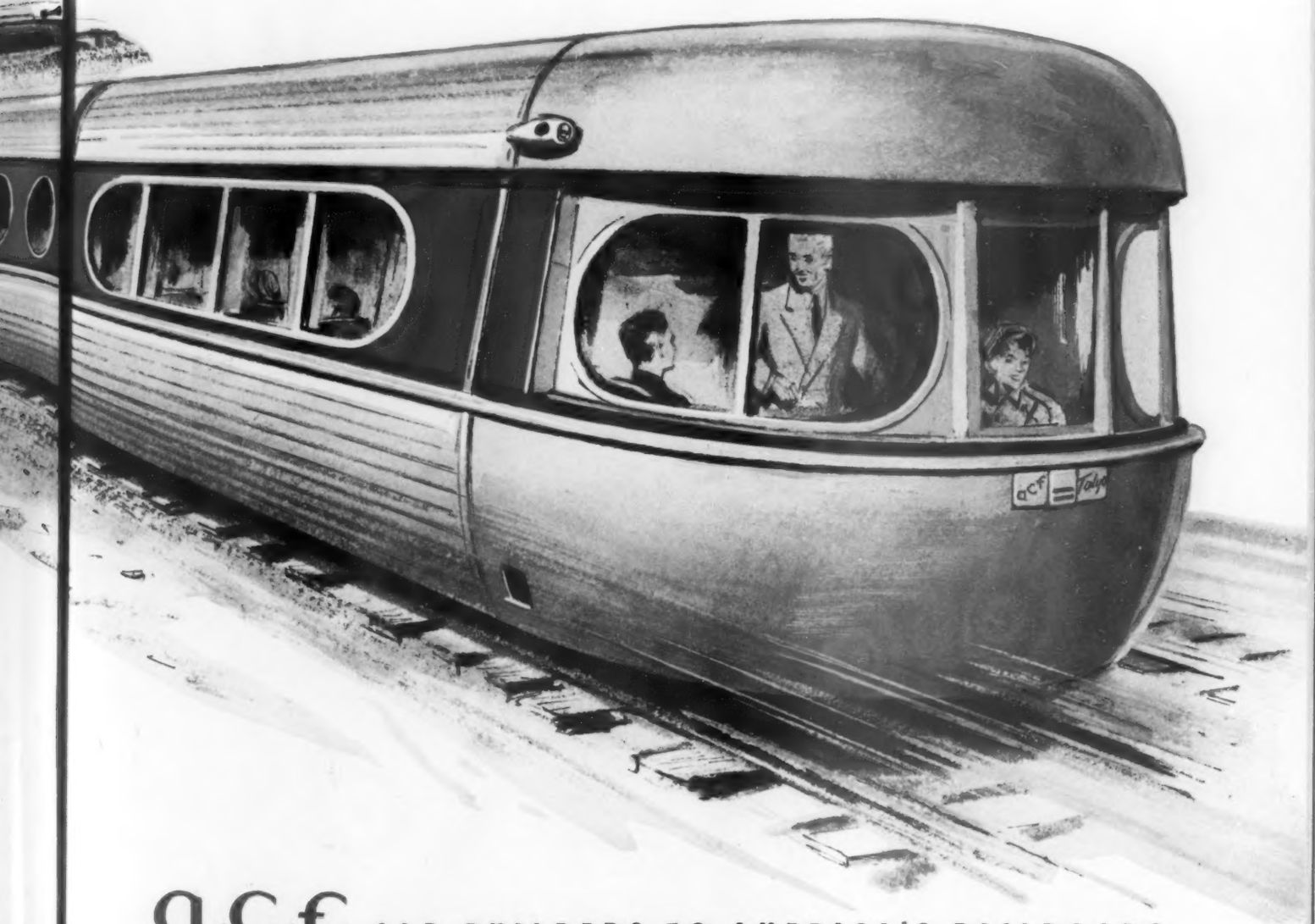
This message couldn't be more timely in view of today's high operating costs and the stiffening competition for America's travel dollar.

The Railroader's most effective weapon is to lower operating costs and speed up passenger schedules.

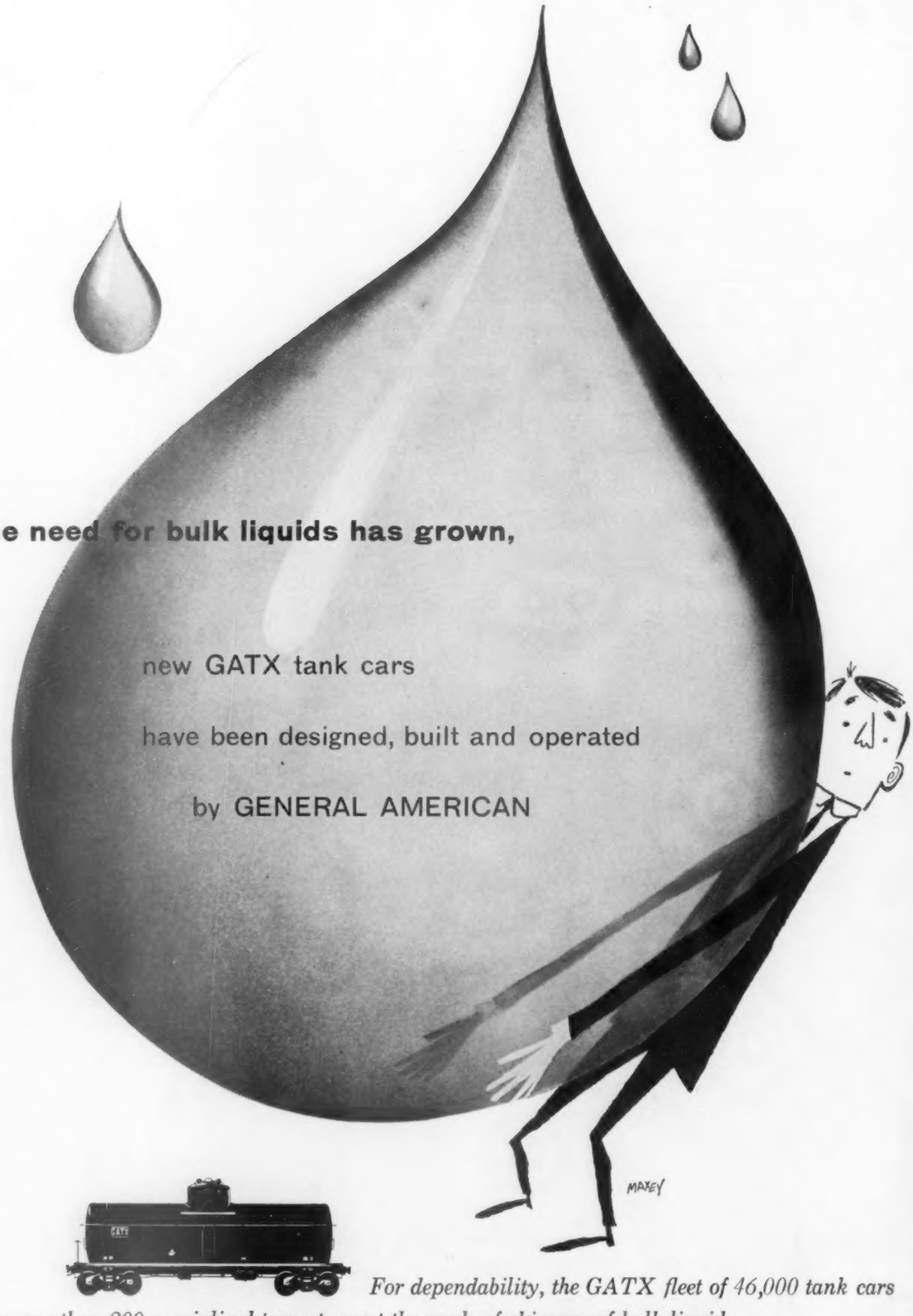
During the past three years a.c.f. has been doing something about *both* by developing the a.c.f. Talgo for use on American rails.

Actual operating experience in Spain has been particularly gratifying in terms of faster and safer operation on curves... quicker starts and stops. As a result the a.c.f. Talgo has cut 25% from passenger schedules. Imagine the impact this would have on today's highly competitive travel market.

We at a.c.f. are now in a position to translate the knowledge and experience gained over the past three years into a *new kind of train for American Railroads.* We believe that the advances and improvements made on the a.c.f. Talgo will start a new era in American railroading. Call in your nearby a.c.f. Representative and hear the facts. American Car and Foundry Company, New York Chicago • St. Louis • Philadelphia • Cleveland San Francisco.



a.c.f. CAR BUILDERS TO AMERICA'S RAILROADS



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This Horse-and-Buggy Law Needs Repeal

In New York State the railroads are going to ask the legislature at its forthcoming session to repeal the so-called "full-crew law"— which requires the employment of a third brakeman on all freight trains of more than 25 cars and specifies minimum crews of 5 men for switching movements and of 3 men for the movement of locomotives only (without cars).

The law also requires the employment of baggagemen in addition to brakemen on all trains carrying baggage. The railroads call this statute an "excess-crew law." An equally accurate term would be the "law for the management of railroads by retired or deceased legislators."

This law cost the New York railroads over $5 million in 1952. This was $5 million thrown away. There is no useful work for a third brakeman to do on a freight train. The same trains that are required to have three brakemen in New York State traverse neighboring states with two brakemen, with no loss in efficiency or safety. Indeed, having a third brakeman on a train subtracts from safety, rather than contributing to it, since the presence of a third brakeman simply means one more employee exposed to injury if the train should be involved in an accident.

This outworn law was enacted in 1913—forty years ago, since which time there has been a revolution in transportation. Back in 1913 practically all long-haul traffic moved by rail. There was no other way for it to go. In those days, the law actually did "make jobs" for additional brakemen, in all probability. The railroads simply hired the extra men, reflected the added cost in their rates. and the public paid the bill because they had no alternative.

Things are different now. Most passenger traffic and a large and increasing ratio of freight tonnage now move by highway. Moreover, New York is traversed in both directions by barge lines which not only have no "full-crew laws" to plague them, but get their right-of-way free, at the taxpayers' expense. Then, too, New York is building a cross-state "throughway" at fabulous cost—still further to add to the difficulties of the state's railroads in competing for traffic. For good measure, New York's railroads are confronted with the perennial threat of the St. Lawrence Seaway.

All in all, there is no state in the union where the railroads are less able than in New York to bear the burden of arbitrary political exactions such as this "full-crew law." When enacted forty years ago, this law added to the employment of trainmen, probably without affecting other employees adversely. But now, with so many alternative agencies of transportation available, any arbitrary and cost-increasing burden like this undeniably *affects all railroad employment adversely*. By increasing railroad costs, such a law keeps railroad charges higher than they would otherwise have to be—thus shrinking railroad traffic and the number of available jobs for railroad employees.

The $5 million the New York railroads are throwing away for these excess trainmen is $5 million that could and doubtless would be used to some effective purpose, either to attract traffic by making rate concessions or to hire additional employees to do useful work in repairing and modernizing cars, painting stations, improving the riding quality of track—and otherwise making railroad service competitively more atractive to the shipping and traveling public.

Railroad trainmen cannot be blamed any more than any other group can for having a concern for protecting their jobs. What is certainly questionable about this law, however, is whether such legislation—which, while predatory, probably did promote employment of trainmen in 1913—is still able to protect employment in 1954. The evidence is all to the contrary. The law as it stands—by adding to the railroads' competitive difficulties—undeniably has a depressing effect on all railroad employment, including that of the trainmen themselves.

This paper has sufficient confidence in the intelligence and integrity of railroad employees—including the trainmen who are erroneously supposed to be the beneficiaries of this law—to believe, if the facts are fully and frankly presented to them, that they themselves would vigorously support the repeal of this out-dated law. It is certainly the duty of the railroads to supply this information, as well to employees as to the public generally.

It's time to get the railroad industry out of all its hold-overs from the horse-and-buggy era. Up-to-date railroading has to be done by up-to-date management in accordance with up-to-date conditions. The politicians of 1913 probably weren't very expert about how railroads should operate, even in 1913. It's absolutely certain that they had no idea whatever about how to operate railroads efficiently in 1954. But that's the way it'll continue to be until this moss-covered law is discarded.

Questions and Answers FOR THE TRANSPORTATION DEPARTMENT

Originating carrier "A" offers carrier "B" a car with gross weight of 200,000 lb. Destination is on carrier "C," a non-subscriber to car service and per diem rules, which publishes a load limit of 175,000 lb. Must "B" accept the car from "A"?

Yes. Originating road has responsibility for transfer only when gross weight exceeds 210,000 lb.

Yes. A recent revision of Car Service Rule 14-2-a-2 relieves the originating road-haul carrier of the responsibility for rearrangement or transfer of load, if the gross weight of car and lading does not exceed 210,000 lb. Furthermore, section three of this rule makes it clear that the receiving road ("B") must be responsible for its inability to handle cars of less gross weight than this. It follows, therefore, in this case, in the absence of any agreement between "B" and its non-subscriber connection, that "B" must be responsible for that connection's inability to handle the load.—*G.C.R.*

[Car Service Rule 14-2-a-2 became effective July 1, 1953. At the same time Rule 14-3-a was changed, in order to harmonize with Rule 14-2-a-2, to provide that costs of transfer would be borne by the receiving road when cars are properly loaded under the provisions of Section 2.]

The present method of computing car hire creates "per diem runs," to get cars off-line before midnight. Car time could be saved if there were some incentive to make interchange deliveries earlier. It is suggested that the delivering road be permitted to reclaim from the receiving road 10 cents per hour for each hour the car is delivered before midnight. Is such a plan practicable or desirable?

No. Cost of additional records would be prohibitive.

This suggestion, in reality, substitutes an hourly car-hire basis for the present per diem. While the current per diem charge, when reduced to an hourly figure, produces a rate of 10 cents, any subsequent change in the per diem rate very likely would result in an hourly figure involving fractions of a cent.

This would complicate accounting. Furthermore, it has not been demonstrated satisfactorily that the present per diem basis leads to per diem runs, as suggested in the question.

While it is possible that adoption of an hourly charge might stimulate movement of some cars, getting them through yards and off line more promptly than under the present daily rate, it is this committee's view that the cost of maintaining the additional records would be prohibitive.

It does not, therefore, recommend adoption of such a plan of car-hire settlement.—*Committee on Transportation, Eastern Association of Car Service Officers.*

(A large eastern trunk line, after noting this proposal, analyzed its deliveries to all connections at two of its larger interchange points in Ohio during the month of September 1953, with these results:

DELIVERIES TO CONNECTIONS

Period	No. Cars	Per cent
12:01 a.m. to 3 a.m.	73	7.8
3 a.m. to 6 a.m.	75	8.0
6 a.m. to 9 a.m.	83	9.0
9 a.m. to 12 noon	108	11.5
12 noon to 3 p.m.	200	21.4
3 p.m. to 6 p.m.	83	9.0
6 p.m. to 9 p.m.	182	19.5
9 p.m. to 12 p.m.	129	13.8
Total	933	100.0

(While fully 33.3 per cent of these cars were delivered to connections in the six hours prior to midnight, this is hardly conclusive proof that per diem runs account for an overwhelming proportion of total cars interchanged. As a matter of fact, almost exactly the same volume of cars were interchanged during the six hours between 9 a.m. and 3 p.m.

(We would like to get some figures from other roads to see if the same situation that applies at the two interchange points mentioned above is true elsewhere. We will keep the identity of cooperating railroads confidential.

(Also, if anyone disagrees with the E.A.C.S.O.'s committee on transportation, or with my few remarks, we would like to hear from you.—*G.C.R.*)

Quite a few answers, some of them correct, have come in to the "quiz" contained in the November 23 column. We'd like to have more, too. But, if you send us your answer, remember, that once you have made your selections, if you've done the job correctly, there should be *no* empty milage necessary to get cars to their owning roads.—*G.C.R.*

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly news issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, *Railway Age*, 30 Church Street, New York 7.

Photo by Durant Barclay, Jr., Virginia, Minn.

NIGHT VIEW taken from the inboard end of dock No. 3, showing the east side of dock No. 2. The older type lighting system may be seen at the extreme right.

How Lights Help in Ore Movement

A new lighting system was installed by the Great Northern during the 1952-53 winter season on two of its four iron ore loading docks at Superior (Allouez), Wis. Ore shipment on the Great Lakes is an around-the-clock operation while the lakes are open, and ore loading docks must have adequate light for 24 hours each day.

The new lights, which were placed on docks No. 1 and No. 2, consist of two steel floodlight bridges on each dock. They are placed about one quarter of the way from the outer and inner ends of the dock, respectively.

The overhead cross member of each bridge mounts five 1,000-watt floodlights, directed toward the end of the dock; five 750-watt floodlights directed inward; and five 300-watt reflector-type lamps on the underside for lighting the area under the bridge. The lighting units are 80 feet above the deck of the dock, and 160 feet above the water line. The lighting system not only illuminates the working area on the docks, but also supplies light in the slips between the docks.

In the 1953 ore shipping season the installation proved highly satisfactory.

The old lighting system consisted of reflector-type lighting units, suspended from cables strung across the dock from 30-ft. poles, placed at 120-ft. intervals along the dock. There were five lights on each string, and 19 strings on the longest dock, No. 1. The older type lighting is still in service on dock No. 3, an edge of which shows in the illustration.

A shortcoming of the older type system was that cables and lighting fixtures were corroded by stack gases from the ships lying alongside. The structural members of the new lighting system are heavy enough so that a thorough paint job every few years is expected to give adequate protection. The lighting fixtures are also more accessible for painting.

In addition to the new lighting, a gantry crane was installed on dock No. 1. It spans four tracks and travels the full length of the dock on rails located between the outer tracks and the spout control mechanisms. The function of this crane is to place a shaker on cars to dislodge ore which does not readily run out of cars when the doors are opened. The crane is powered by a diesel-electric generator set and is equipped with two motors, one for hoist operation, and one for propelling the crane along the dock. For night work, the gantry has eight reflector-type lamps on its underside for lighting the working area under the crane.

Ignitron motive-power

AC-DC rectifier tube pioneers new electric-locomotive efficiency

The Westinghouse Ignitron Tube now adds the advantage of economical, easy-to-transmit a-c power to the efficiency and dependability of d-c traction motors.

Two characteristics of this application contribute many benefits. A standard d-c traction motor can be used, with its ability to develop high torque at low speed and efficient performance at high speed while retaining low initial and low maintenance costs. The Ignitron tube also permits equal adaptability to either 25 or 60-cycle power, making practical the extension of railroad electrification at commercial frequencies.

Proof of the Ignitron locomotive's capability was convincingly demonstrated when it hauled 161 loaded coal cars for 130 miles at an average of 32 mph! In the measure of freight service performance, this typical run yielded an exceptional 434,980 gross ton-miles per train-hour.

This Westinghouse locomotive features a number of significant operating advantages: Smooth, uniform starting and acceleration . . . ability to "hang on" at low speeds . . . lowered maintenance costs . . . higher tractive force . . . and easier riding. And by continuing to focus extensive research on the problem of better equipment for the railway industry, Westinghouse demonstrates its ability to further railroad economies and provide the ultimate in efficient, low-cost motive power. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

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YOU CAN BE SURE... IF IT'S

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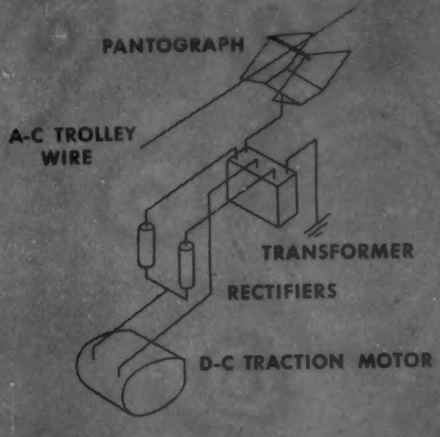
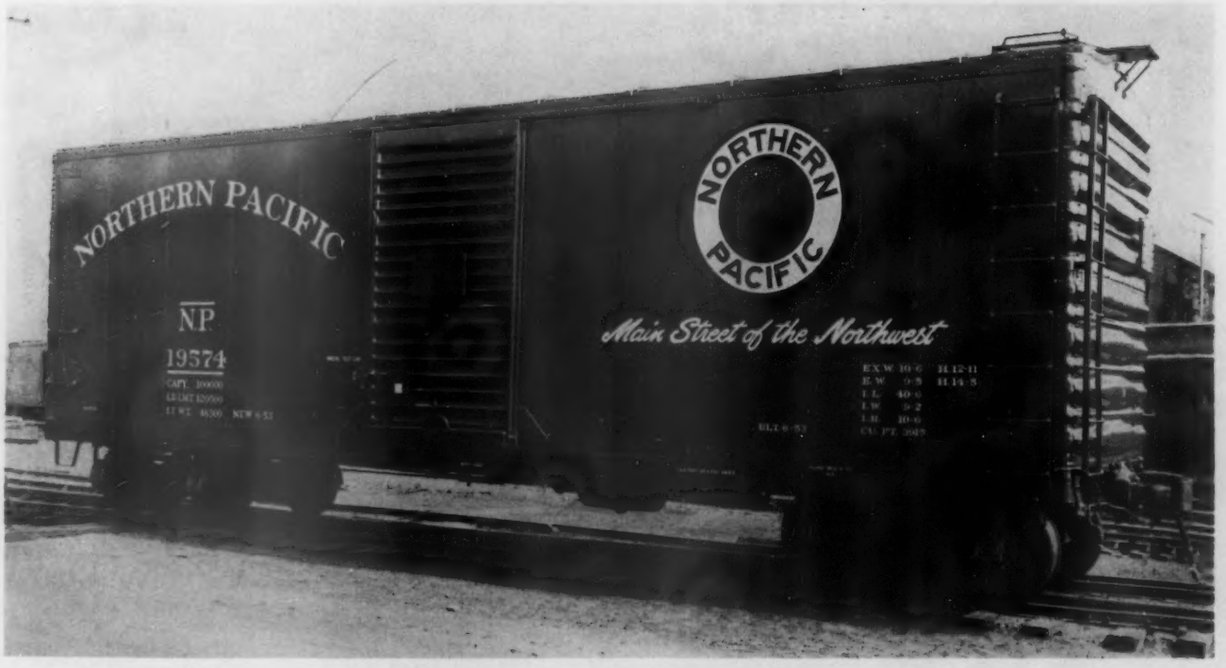
Shown at right is the exclusive Westinghouse Ignitron Tube, high-capacity and trouble-free AC-DC rectifier which is the key to Ignitron Locomotive operation.



At left, a schematic drawing illustrates the principal units used in the conversion. AC is first picked up from the overhead trolley lines by conventional pantographs. It is then fed to a transformer and on into the Ignitron tubes where it is converted into efficient DC for powering the traction motors.



"WE DO NOT BELIEVE that anyone knows how the 40 and 50-ton and even larger capacity car is meeting the needs of shippers today."

Fast Turnaround for More Net

- **Are the railroads running the proper length trains?**
- **Can the railroads use better communications and electronic computers?**
- **How high should the per diem rate be to provide an incentive for faster turnaround?**
- **Would some cars of smaller capacities help cut turnaround time?**

Ten billion dollars worth of freight car equipment standing still 85 per cent of the time in a business of movement! I suggest that this is no way to serve our customers—or make money." This was the point emphasized by John E. Kusik, vice-president—finance of the Chesapeake & Ohio, to members of the Eastern Association of Car Service Officers recently.

Mr. Kusik said there are five factors, in his opinion, which should be considered in any constructive approach to speeding up freight car turnaround: (1) length of trains; (2) efficient capacity of freight cars; (3) an "adequate" per diem rate; (4) better communications and the use of electronic computers; and (5) better performance in meeting scheduled interline connections.

Mr. Kusik referred to the investment in "idle" freight cars as being "locked up." With $10 billion of equipment, he said, standing still 85 per cent of the time, "the normal cost of money locked up under this investment is $2 million for each day of the year excepting Sundays. The cost of any waste in using this investment could be, therefore, staggering. An idle or unproductive day would cost $2 million." Mr. Kusik said that freight cars are comparable with industrial inventories. Industry makes money by turning over inventories and railroads can make it by turning around theirs.

But how to cut down turnaround time? The C&O vice-president suggested that one thing to be considered is the length of freight trains. Present day long trains have come about through transportation department officers' sincere desire to cut costs. However, Mr. Kusik said, it is possible that the opposite effect has been achieved. Low transportation ratios have been brought about by running longer trains, to be sure. But, when one considers the chain reaction of other expenses ascribable to the longer trains—more powerful and more expensive locomotives, heavier roadbed and rail, and larger yards in which cars stand still most of the time—it is time to look at the whole picture before deciding what the economical length of trains should be. Train lengths, Mr. Kusik said, should not be settled "by some arbitrary decision or the pressure of labor brotherhoods."

Closely linked to the question of train length is the one of the proper carrying capacity of a freight car.

To begin with, "we do not believe that anyone knows how the . . . 40 and 50-ton and even larger capacity car is meeting the needs of shippers today." Obviously, such cars do serve the needs of some shippers. But, he said, it is probable that a very large segment of the shipping public might be better served by smaller capacity cars. The smaller cars might give the railroads some competitive advantage not now obtainable, and it is likely that such cars would spend less waiting time and would turn around faster. "Savings in investment and recurring operating costs would much more than offset the higher unit transportation costs of such smaller freight car movements."

Trailers-on-Flats

The movement of trailers on flat cars, Mr. Kusik continued, "aims at carrying loads in lower capacity units than the standard freight car, thus recognizing greater convenience to shippers." The trailer-on-flats idea, with properly scheduled trains, could make an important contribution to accelerating turnaround. The speaker also mentioned the C&O's idea of a 12-ton capacity hybrid vehicle which could run on both rails and highways as a possibility for helping speed car movements. Clearly, such equipment could not be interchanged with present day equipment, but it could be operated in special trains, thus "serving the greater convenience of shippers, improving turnaround, and cutting investment and recurring costs."

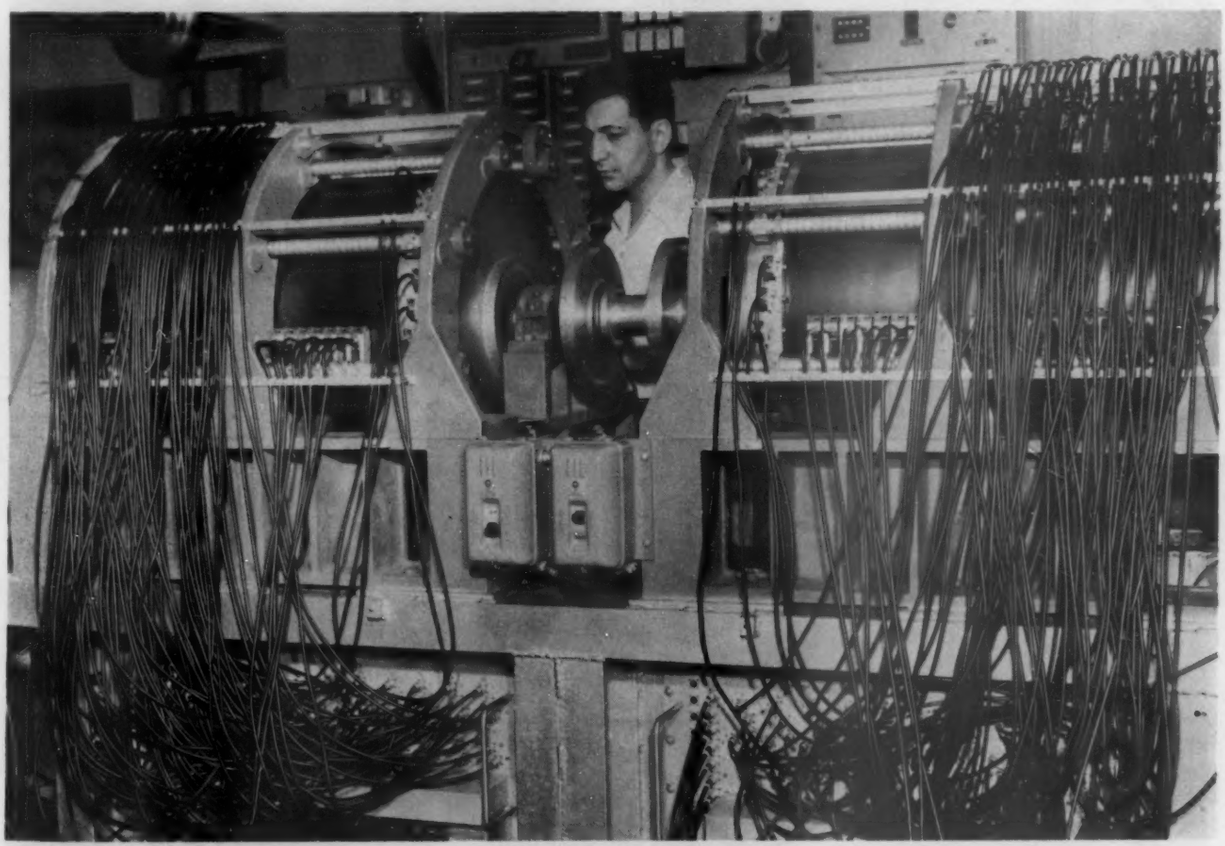
Mr. Kusik praised efforts of transportation officers to effect better performance in meeting scheduled connections with foreign lines. Many times, he said, matching of interline schedules had led to a close examination of waiting time all along the line, with a resulting reduction in transit time of one or two days. More of this could be achieved, he continued, if transportation men

THE PER DIEM RATE

The problem of establishing a per diem rate is not one of the past but of the future. . . The objective of the railroad industry is to obtain and maintain future adequate car supply in war and peace. The per diem rate, therefore, should be set on the basis of forecasting future levels of business activities and requirements for freight car equipment, to serve properly the anticipated levels of traffic. . .

A per diem rate cannot be determined by precise accounting slide rule or other fine measurements. Just think how bold it is to dispute a per diem figure within a matter of some cents when we are not dealing with a problem of the past, but of the future. . .

I am not able to say how high the per diem rate should be. It might well be, however, that taking into consideration all of the current cost factors, as well as the need of an incentive to own—rather than rent—freight cars, it could become as high as $10.—*J. E. Kusik*



ELECTRONIC COMPUTERS, coupled with good communications systems, before long will be aiding the railroads in distributing freight cars efficiently.

always fully recognized the interests of the shippers and the railroad industry as a whole and not just the possible short-run benefits to their own railroads.

The railroads have made spectacular progress in operations through the use of centralized traffic control. But Mr. Kusik believes they have been "slow about adopting important companion improvements for which the trail was blazed by c.t.c." He said he was thinking of modern communication systems replacing the party line telephone and the Morse code telegraph. Modern communications, typified in the printing telegraph, contribute to making the overall transportation operation, including freight car turnaround, more efficient. The main usefulness of these machines lies in the fact, he said, that they communicate information in a form which makes it available almost immediately as a basis for action.

Tieing in with such communication systems before long, Mr. Kusik continued, will be large-scale electronic computers. "Through the use of a modern communication system, we could introduce promptly into such a computer detailed data as to contents, routing, type of car, etc., with respect to each car coming on our line. The phenomenal speed and processing capacity of these computers would make it possible to digest this information quickly.

"We would know today how many cars are expected to reach their destinations tomorrow, the next day, and so on. Not only would we know in advance how many empty cars would be available, but we would know where they would be available for their most effective utilization."

Fifth on the speaker's program to cut turnaround time was setting an "adequate" per diem rate which would provide "an incentive" to keep the cars moving. This is a difficult task, Mr. Kusik conceded, but "we should recognize that the problem of establishing a per diem

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THIS CAR will traverse the Reading to instruct enginemen in the operation of diesel locomotives, and enginemen, trainmen and shop men in the operation and maintenance of air-brake equipment.

Diesel Instruction Car Shown

. . . IN READING TERMINAL EXHIBIT

ONE OF THE ATTRACTIONS of the exhibit was this 2,400-hp. "Train Master," one of nine ordered by the Reading.

rate is not one of the past but of the future. There is no justification, therefore, for overemphasizing the past by burrowing through masses of paper with a magnifying glass, trying to measure today's costs on the basis of what happened one or two decades ago. The objective of the railroad industry is to obtain and maintain future adequate car supply in peace and war. The per diem rate, therefore, should be set on the basis of forecasting future levels of business activities and requirements for freight car equipment, to properly serve the anticipated levels of traffic."

A per diem rate, Mr. Kusik continued, cannot be determined by precise accounting or other fine measurements. A person is bold indeed, he said, to think he can set a per diem rate accurate to within a few cents when he is dealing with a problem of the future and not of the past. Inflation has distorted historical comparisons because of the changed value of the dollar, while "modern technology has stepped up tremendously the rate of obsolescense of all mechanical equipment."

For these reasons, Mr. Kusik said, overly precise calculations based on past history are practically valueless. Hence his suggestion that a "bona fide group incentive plan for obtaining maximum turnaround from rolling stock" be based on estimated future requirements and present costs.

"A fully compensatory, incentive per diem rate will not penalize any railroad which owns its full share of the national fleet in relation to its present and anticipated traffic levels," he concluded. "It will act as a powerful incentive for each railroad to keep up its share of freight car ownership, as well as to invest money in all such modern service facilities as would contribute to the maximum turnaround of freight cars. . . We will find that it will cost less to do a better transportation job."

An instruction car containing a full set of controls for a modern diesel locomotive and air brakes used on locomotives and freight and passenger cars was an interesting part of the exhibit of equipment displayed by the Reading at Philadelphia, October 23 and 24.

This car, recently completed at the company's Reading shops, will be used to instruct enginemen in the operation of diesel locomotives. It will also be used to instruct enginemen, trainmen and shop personnel in the operation and maintenance of various types of locomotive and air-brake equipment.

The car contains a classroom equipped with the latest in audio and visual training aids, including slide and moving-picture projectors, a reflected light machine for projecting directly from printed material, and a tape recorder. It will be employed on all parts of the railroad. For lectures it will seat 22 persons.

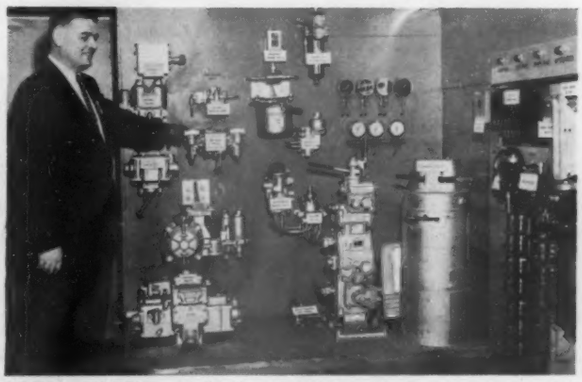
In addition to all of the controls of a diesel locomotive to be used in demonstrating the operation of this equipment, the car contains parts of the AB freight brake and the electropneumatic passenger brake.

The car is self-sustaining. Three phase a.c. electric power is available from a Waukesha Enginator of 25 kw. capacity underneath the car. Behind a partition back of the control stand in the classroom section is a steam generator and a 350-gal. water supply tank. At either side of the end door is a compartment, in one of which is a Westinghouse motor-driven air compressor and reservoir, and in the other, a motor-generator set with an output of 2 kw. of d.c. power at 80 volts. The car is air conditioned.

Across the other end of the car is an office with a desk, bookcase, and couch. Opening from a center corridor at this end of the car is a toilet room on one side and a compartment on the other in which are the control panels for lights and power equipment.

In addition to the instruction car, the Philadelphia exhibit included a Fairbanks-Morse "Train Master" locomotive, the first of nine of these 2,400-hp. units which will be put in service by the Reading.

Over 7,500 persons attended the two-day exhibit.



FRED ELLIS, air-brake instructor, demonstrates the diesel locomotive controls in the instruction car, all of which function as in actual operation.

A FULL-SIZE operating cutaway of the opposed-piston F.-M. engine was one of the features of the exhibit.

AUTO RENTAL OPERATIONS have been inaugurated by the Hertz Rent-A-Car System in three major railroad stations — Union Station, Chicago; Union Terminal, Cincinnati, and Milwaukee Station, Milwaukee. The new services are a time-saver for rail-auto travelers, who now can pick up cars directly at those stations, and return them there, instead of at separate rental offices. Cars are garaged at the stations, and Hertz attendants are on duty during normal business hours. Hertz is considering similar operations in other major rail terminals, in line with its belief that promotion of rail-auto travel must be stepped up if more motorists are to be won over to train travel.

Financial

(*Continued from page 17*)

Penndel Company.—*Acquisition.*—This newly-formed subsidiary of the Pennsylvania has applied to the I.C.C. for authority to acquire, through merger, 14 companies which are now a part of the PRR system. The move is designed to simplify the corporate structure of the Pennsylvania, and would result in savings in bookkeeping expenses and "other corporate expenses."

Penndel was incorporated November 20, 1953, and company headquarters will be located at Haverford, Pa. The new company proposes to issue 1,000 shares of $1 par stock. This stock would be distributed to the Pennsylvania and to another PRR subsidiary, the Pennsylvania Company, and all capital stock of the merged companies would be cancelled. The Pennsylvania Company would ultimately turn over to the PRR the 372 shares of Penndel stock which it would acquire under this plan. The PRR, in turn, would hand over 488,049 shares of Norfolk & Western preferred stock to the Pennsylvania Company.

The 14 companies to be merged into Penndel include: Louisville Bridge & Terminal; Cumberland Valley & Martinsburg; Delaware River Railroad & Bridge Co.; Englewood Connecting; Grand Rapids & Indiana; Indianapolis & Frankfort; New York, Philadelphia & Norfolk; Ohio Connecting; Pittsburgh, Ohio Valley & Cincinnati; South Chicago & Southern; Southern Pennsylvania Railway & Mining Co.; Wheeling Terminal; York, Hanover & Frederick, and Youngstown & Ravenna.

Sacramento Northern.—*Reorganization.*—Because it has been unable to pay either principal or interest on outstanding bonds and notes, this road has filed a petition in federal court for reorganization under the Bankruptcy Act. The SN is a wholly-owned subsidiary of the Western Pacific. The latter road holds practically all ($5,213,663) of SN first mortgage bonds, on which no interest has been paid since 1935. The SN also owes the WP for notes totaling $4,500,000, on which unpaid interest amounts to $4,467,751. In addition, the WP has made "miscellaneous advances" from time to time which, with interest, now total $10,735,968.

Securities

Applications

BANGOR & AROOSTOOK.—To sell $2,000,000 of first mortgage 4½ per cent bonds, proceeds from which would be used to retire outstanding collateral trust bonds held by the Reconstruction Finance Corporation and the public. The 4 per cent collateral trust bonds are due to mature July 1, 1961, and the total amount outstanding is $2,100,000. Of this amount, the R.F.C. holds $1,675,000.

The first mortgage bonds, now held in the B&A treasury, will mature July 1, 1976, and the effect of this refinancing would be to extend maturity dates, simplify bonded indebtedness, and provide relief from heavy sinking fund requirements. The B&A asked the I.C.C. for authority to sell the first mortgage bonds at 90, with relief from competitive bidding requirements. The road said it would seek a purchaser who would agree to resell the bonds to the railroad over the next six years at not more than what was paid for them.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—To assume liability for $7,650,000 of series RR equipment trust certificates, to finance in part 65 diesel units and 100 freight cars costing an estimated $10,381,406.

	Description and Builder	Estimated Unit Cost
6	1,750-hp. freight "A" units (Electro-Motive Division, General Motors Corporation)	$193,532
14	1,750-hp. road-switchers (General Motors)	189,739
5	1,750-hp. road-switchers (General Motors)	159,982
8	1,600-hp. road-switchers (American Locomotive Company)	149,174
8	1,600-hp. road-switchers (Fairbanks, Morse & Co.)	147,989
6	1,200-hp. switchers (General Motors)	112,417
5	1,000-hp. switchers (Alco)	107,085
5	1,200-hp. switchers (Fairbanks, Morse)	105,470
8	1,200-hp. switchers (Baldwin-Lima-Hamilton Corporation)	105,290
100	70-ton covered hopper cars (Pullman-Standard Car Manufacturing Company)	8,071

The certificates, to be dated January 1, 1954, would mature in 30 semiannual installments of $255,000 each, beginning July 1, 1954. They would be sold by competitive bidding, with interest rate to be set by such bids.

UPPER MERION & PLYMOUTH.—To issue a $300,000 note, with interest at 3½ per cent, to the Alan Wood Steel Company in partial payment for 302 used coal cars. Total cost of the cars is $348,206. The note would be payable in ten semiannual installments of $30,000 each, beginning six months from date of issue.

Authorization

CHICAGO, BURLINGTON & QUINCY.—To assume liability for $5,400,000 of equipment trust certificates, to finance in part 35 diesel units costing an estimated $6,970,000 (*Railway Age*, November 2, page 70). Division 4 approved sale of the certificates for 99.439 with interest at 2⅞ per cent—the bid of Kidder, Peabody & Co. and three associates—which will make the average annual cost of the proceeds to the road approximately 2.96 per cent. The certificates, dated November 1, will mature in 30 semiannual installments of $180,000 each, beginning May 1, 1954. They were reoffered to the public at prices yielding from 1.9 to 3 per cent, according to maturity.

Security Price Averages

	Dec. 1	Prev. Week	Last Year
Average price of 20 representative railway stocks	60.59	59.11	66.81
Average price of 20 representative railway bonds	90.79	90.70	94.41

Dividends Declared

ALABAMA GREAT SOUTHERN.—ordinary, $4; 6% participating preferred, $4; both payable December 24 to holders of record December 4.

ALLEGHENY & WESTERN.—guaranteed, $3, semiannual, payable January 2 to holders of record December 21.

ATCHISON, TOPEKA & SANTA FE.—common, $1.25, quarterly, payable March 2 to holders of record January 29, and $2, extra, payable January 5 to holders of record December 11; 5% preferred, $1.25, semiannual, payable February 1 to holders of record December 31.

BOSTON & ALBANY.—$2.25, payable December 31 to holders of record November 30.

CHICAGO SOUTH SHORE & SOUTH BEND.—25¢, quarterly, payable December 15 to holders of record December 4.

CLEARFIELD & MAHONING.—$1.50, semiannual, payable January 2 to holders of record December 21.

DELAWARE & HUDSON.—$1, quarterly, payable December 28 to holders of record December 11.

ERIE.—$1, payable December 15 to holders of record December 4.

KANSAS, OKLAHOMA & GULF.—6% preferred A, $3, semiannual; 6% preferred B, $3, semiannual; 6% preferred C, $3, semiannual; 3% preferred, $3; all payable December 1 to holders of record November 23.

LEHIGH VALLEY.—30¢, resumed, payable January 20 to holders of record January 11.

MINNEAPOLIS & ST. LOUIS.—30¢, quarterly, and 20¢, extra, both payable December 21 to holders of record December 11.

PITTSBURGH, FORT WAYNE & CHICAGO.—$1.75, quarterly, payable January 4 to holders of record December 10.

PITTSFIELD & NORTH ADAMS.—$2.50, semiannual, payable January 4 to holders of record December 18.

READING.—4% 1st preferred, 50¢, quarterly; 4% 2nd preferred, 50¢, quarterly; both payable January 14 to holders of record December 24.

UNION PACIFIC.—$1.25, quarterly, and $1, extra; both payable January 2 to holders of record December 7.

WARE RIVER.—$3.50, semiannual, payable January 6 to holders of record December 18.

Supply Trade

John Francis Kelly, assistant to president of the **General Railway Signal Company,** has retired.

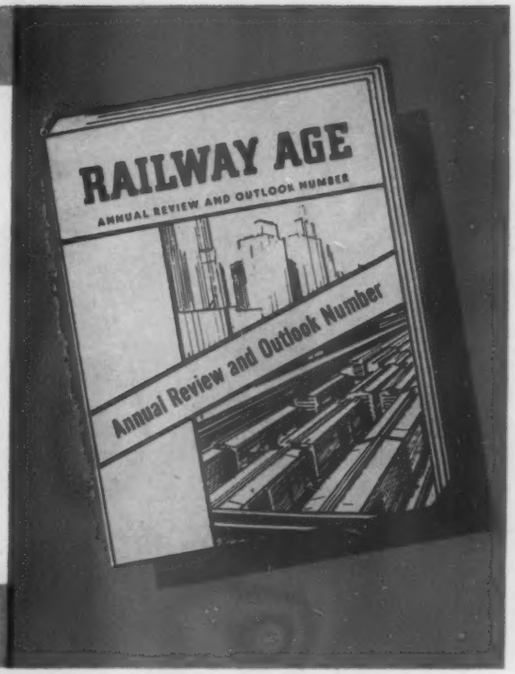
McDougall-Butler Company has appointed **Louis S. Isbell** district sales manager for northern New England, at Auburn, Me.

Hamerslag Equipment Company, 45 Elmira street, San Francisco, has been appointed to handle sales of all **Mercury Manufacturing Com-**

(*Continued on page 38*)

coming...

the 1954 Annual Review and Outlook Number of RAILWAY AGE



This is the issue railway executives look for, study and use for months because it anticipates the official record of the year's railway operations and is the first authentic report on the year 1953.

Publication date January 11, 1954
Closing date December 22, 1953

Product sales messages addressed especially to management throughout the railroad world belong in this *Annual Review Number*. It will be used again and again by railway men who make decisions, because it is the first authoritative report on 1953 railway operations and the first comprehensive forecast of the 1954 outlook.

The *Annual Number* is recognized as authoritative throughout the railway, financial and business world. Manufacturers use this issue to open their year's campaign with the greatest impact of *extra attention* and *extra readership* because they know that much of the information in this issue is available from no other source for many months to come.

Be sure to be in this Annual Review and Outlook Number of RAILWAY AGE—the publication that is part of the business of railroading.

This special issue of RAILWAY AGE contains

*review**

The usual comprehensive, authoritative review. Covers every phase of railway operation —including capital outlays, purchases, traffic, earnings, others.

forecast

Analysis of financial outlook, costs, rates, trends, affecting every phase of railway operation— roadway and tracks, shops and other facilities.

statistical summary

Number of freight cars ordered, motive power orders, passenger cars ordered; figures on construction, communication, signaling; and other compilations of railroad statistics.

**To be prepared by J. Elmer Monroe, V. P. and director, Bureau of Railway Economics, AAR.*

RAILWAY AGE

HEADQUARTERS FOR RAILWAY MARKETING INFORMATION
SIMMONS-BOARDMAN PUBLICATIONS
New York 7, 30 Church St. • Chicago 3, 79 W. Monroe St. • Cleveland 13, Terminal Tower
WASHINGTON, D. C. • PORTLAND, OREGON • DALLAS • SAN FRANCISCO • LOS ANGELES

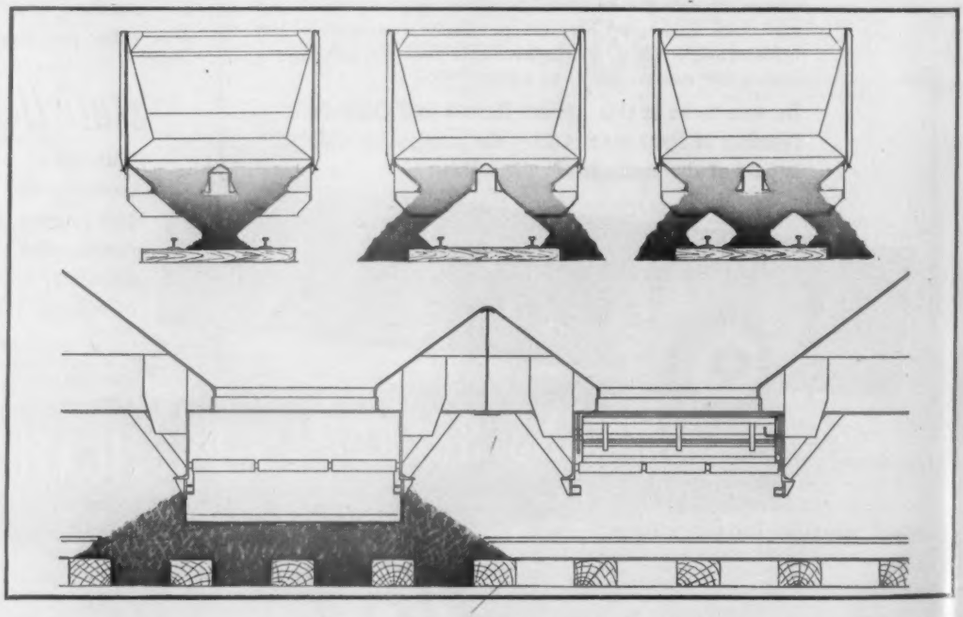
SIDE STAKES LOCATED OUTSIDE

Side stakes are located on the outside of the car. They are automatically arc-welded to the side sheets. This design keeps the interiors smooth and reduces the danger of damage and corrosion. All side sheets are butt-welded together vertically and are automatically arc-welded to the side sill and side plate.

DOOR ARRANGEMENT AND CONTROL

The cars have eight longitudinal doors. The four center doors, controlled from either side of the car, are operated as two units. Each longitudinal half of the car acts as a unit to dispose of the load between the rails.

The four side doors operate as units to dispose the load outside the rails. Both side and center doors can be stopped safely in any desired position.



500 NEW ballast cars

Welded construction gives greater control over ballast distribution

The all welded construction of these ballast cars, being built at Pullman-Standard's Butler, Penna. plant, eliminates lap joints and rivet heads. Thus, the interiors are completely self-clearing which permits greater control of ballast distribution.

These cars are typical of the many types of special service cars which roll out of Pullman-Standard's shops every year. They are the product of over one hundred years of car building experience combined with the most modern tools and techniques.

Today, many railroads are taking advantage of Pullman-Standard's unmatched research and production facilities. They have found that it is more economical to have cars produced—whether built to our design or their own specifications, where a specialty of car-building permits many custom-designed, cost-reducing machines and fixtures.

YOUR NEEDS CREATE THE PULLMAN "STANDARD"

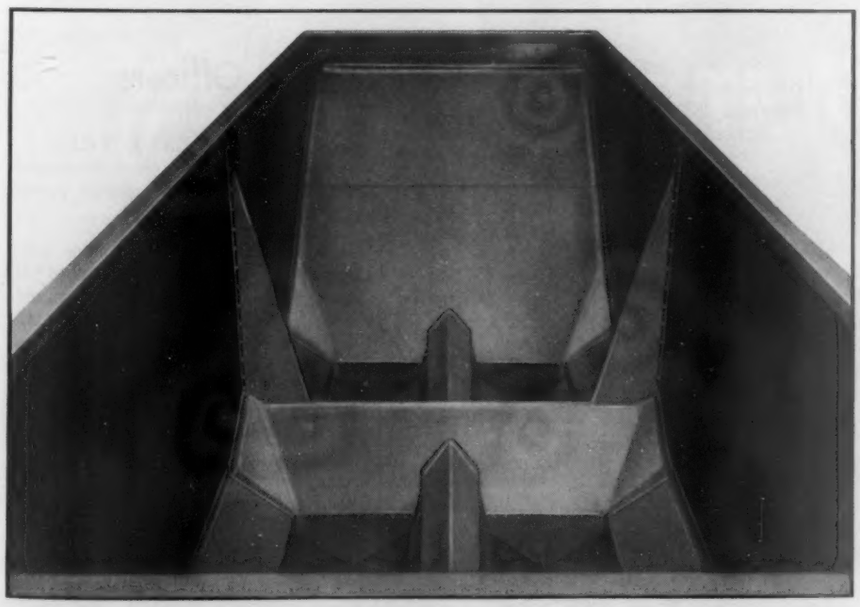
PULLMAN-STANDARD

CAR MANUFACTURING COMPANY

SUBSIDIARY OF PULLMAN INCORPORATED

79 EAST ADAMS STREET, CHICAGO 3, ILLINOIS

BIRMINGHAM, PITTSBURGH, NEW YORK, SAN FRANCISCO, WASHINGTON



FREE FLOW OF BALLAST

Free flow is assured by design and construction. The end floor sheets slope 30° from bolster to door. Floor sheets are secured by welding. Side slope sheets extend from the side sheets to door opening and from slope floor sheet at end to crossridge floor sheets. They are sloped 36° and are assembled by welding. There are two inside braces.

A. M. MIERS, manager of the design division — engineering department, at the Pullman Car Works at Chicago, who has been appointed manager—sales and service engineering division, of the Pullman-Standard Car Manufacturing Company.

HAROLD O. WASHBURN (left), who has been elected chairman of the board of American Hoist & Derrick Co. He has been succeeded as president by JOHN E. CARROLL, vice-president of sales (right).

F. W. WEHRHEIM, who has been elected vice-president in charge of sales of the Appleton Electric Company, at Chicago, succeeding E. A. Murray, resigned. Named as assistant to Mr. Wehrheim is I. W. Strong, sales representative at Denver Colo.

NEW OFFICERS OF OKONITE COMPANY, as reported in *Railway Age*, November 30, are (left to right): ALBERT F. METZ, chairman of board and chief executive officer; R. STUART KEEFER, president; EDWARD D. YOUMANS, vice-president—research and product development; CHARLES M. KIRKLAND, vice-president—sales.

(*Continued from page 34*)

pany equipment in northern California.

F. E. Bennett Company, Portland, Ore., has been named sales representative in Oregon for **Magnesium Company of America,** Materials Handling division.

Rucker Company, Oakland, Cal., has been appointed distributor of **Rotary Lift Company's** industrial lifts for Washington, Oregon, Idaho, Nevada and Arizona.

William H. Schmidt, Jr., executive editor of *Railway Age*, whose headquarters have been at the Chicago office of that publication, has been transferred to the paper's executive offices at 30 Church street, New York 7, effective December 7. His overall responsibilities remain unchanged. **Merwin H. Dick,** engineering editor of *Railway Age*, becomes also its western editor, in charge of editorial operations at Chicago.

Ralph H. Bescher has been appointed Pittsburgh district manager of sales and operations of the Wood Preserving division of **Koppers Company.** He was previously manager of the division's technical department at Orrville, Ohio.

OBITUARY

Arthur W. Barth, president of the Henry Giessel Company, Chicago, died November 23 at Grant Hospital in that city.

Railway Officers

BESSEMER & LAKE ERIE. — David L. Stanley has been appointed assistant superintendent motive power at Greenville, Pa.

BURLINGTON.—J. E. Lynn, general agent—passenger department at Kansas City, retired December 1 and has been succeeded by **Herbert C. Wallace,** assistant general agent—passenger department at Denver. Named to replace **Mr. Wallace is Frank J. Swircin,** city passenger agent at Omaha. **Don Meade,** city passenger agent at Kansas City, has been appointed to the newly created position of assistant general agent—passenger department at that point.

(*Continued on page 42*)

Tamping Rate Increased 40%

McWilliams TIE TAMPER

WITH the 600 cu. ft. air compressor the McWilliams Tie Tamper operates 40% faster than it did with the 315-foot compressor formerly used. Recent five day operation (4" to 5" raise, 2½" stone ballast, 24 ties to rail, maximum compaction) *averaged 585' per hour, with speeds up to 620' per hour.*

Railway Maintenance Corporation

PITTSBURGH 30, PA.

DESIGNERS AND MANUFACTURERS OF: McWILLIAMS MOLE AND SUPER MOLE . . . McWILLIAMS TIE TAMPER, CRIB CLEANER AND BALLAST DISTRIBUTOR . . . R. M. C. RAIL JOINT PACKING

1933 UNITED STATES STEEL 1953

USS HIGH STRENGTH STEELS

TWENTY YEARS OF PERFORMANCE

170,000 freight cars have been built

B&O lightweight hopper car "633000" built of U·S·S COR-TEN steel in 1934

Light Weight	31,400 lbs.
Load Limit	137,600 lbs.
Ratio of revenue load to gross load	81.4%

Body Thicknesses—inches

Side and end sheets	3/32
Hopper sides	3/32
Doors	3/32
Floors	3/32
Longitudinal hood	3/32
Cross ridge gussets	1/8
Side stakes	3/32

better with U·S·S COR-TEN steel since 1933

19 YEARS' SERVICE

from 3/32-in. side sheets and end sheets

—famous "old-timer" finally convinces the skeptics

● Back in 1934 when it was announced that the Baltimore & Ohio had designed and built a hopper car 12,000 lbs. lighter than conventional construction, hard-boiled railroad men shook their heads. Nothing like this had ever happened before!

When they heard that end and side sheets would be made of U·S·S COR-TEN high strength steel in only half the normal 3/16-in. thickness, and that floors, cross-ridge sheets, longitudinal hoods, hopper sheets, doors and side stakes too, were of 3/32-in. COR-TEN steel—not the usual 1/4-in. thickness—some expressed the opinion that the car would not last more than a year.

At the Convention in Atlantic City last summer they had a chance to see how wrong they were.

For here on view was old "633000" in person—the *first* freight car built lighter with COR-TEN steel—with 19 years of service behind it, after travelling more than 200,000 miles, hauling more than 6 million net ton-miles of payload—and with the *original* 3/32-in. side and end sheets still in good condition.

The operating history and inspection records of this first all-COR-TEN steel car are worth your study.

For the first three years this car was confined to service on the B&O. It has been hauling unrestricted lading in regular interchange service ever since. In 1944 it underwent a thorough inspection and was adjudged to be "in excellent condition" for a car ten years old.

Again in 1947, after 13 years' service, the inspectors went over it. This time, the slope and cross-ridge sheets and the longitudinal hoods required repair or replacement. Side and end sheets were still in good shape. Back for inspection and repair again this year, these same sheets were—as seen by thousands at the Atlantic City track exhibit—still fit for more service.

* * *

If you are interested in materials for extending life and reducing maintenance costs in *your* freight equipment, let us show you how U·S·S COR-TEN steel can be applied to your designs. 20 years of performance are behind this premier high strength steel.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS

UNITED STATES STEEL

(*Continued from page 38*)

CHESAPEAKE & OHIO.—As reported in *Railway Age* November 30, **Howard Skidmore** has been named director of public relations and ad-

Howard Skidmore

vertising. Mr. Skidmore will have responsibility for the press relations, advertising, magazine, design, promotion and merchandising divisions.

Milton B. Dolinger, United Press bureau manager at Cleveland, has been named news editor, and **Frank A. Buttler,** United Press legislative correspondent at Columbus, assistant news editor, in the press relations division of the C&O at Cleveland.

F. S. Carpenter has been named assistant supervisor of communications at Richmond, Ind.

John G. Lamb, assistant general auditor, Chesapeake district, at Richmond, Va., has been appointed general auditor of that district.

CHICAGO & NORTH WESTERN.—**L. B. Kendall,** assistant vice-president of operation at Chicago, retired November 30.

COTTON BELT. — A. Grayum Baker, purchasing agent at St. Louis, has been appointed vice-president and

A. Grayum Baker

purchasing agent at that point, effective January 1, 1954. **Fred L. Barnes,** assistant general freight and passenger agent there, has been named general freight agent.

Mr. Baker entered railway service in 1917 with the Southern Pacific at Austin, Texas. He joined the Cotton Belt in 1947 as purchasing agent.

LEHIGH VALLEY.—**W. F. Gleeson,** vice-president and general counsel at New York, has retired from active duty after 45 years of continuous service, but will be retained by the road as a consultant. **B. J. Viviano,** assistant general counsel, succeeds Mr. Gleeson as general counsel. **V. C. Ryder,** assistant general counsel, has been named general solicitor. **M. R. Warnock,** general attorney, has been appointed assistant general counsel,

B. J. Viviano

and **T. A. Kelly** has been named general attorney.

Mr. Viviano was born in New York March 24, 1911, and was graduated from Cornell University (M.E. 1933) and from Cornell Law School (LL.B. 1936). After Army service, during which he attained the rank of major, Mr. Viviano joined the LV in 1946 as assistant general attorney. He subsequently became general attorney and in January 1948 was promoted to assistant general counsel.

MISSOURI PACIFIC.—**Clyde McNay,** assistant to chief operating officer, at St. Louis, retired December 1, after nearly 50 years of service.

PENNSYLVANIA. — Jacob D. Fuchs, general superintendent transportation at Chicago, has been named chairman of a Terminal Committee appointed to study and implement plans and procedures to quicken freight movement through yards and terminals and generally to increase efficiency of freight service (see page 14). The committee will have its headquarters at Philadelphia. **Arthur F. McSweeney,** assistant chief of freight transportation for the system at Philadelphia, and **Edward C. Gegenheimer,** manager of operating practices for the system, will be the other members of the committee.

Edward E. Ernest, chief of passenger transportation, has been appointed manager of operating practices, succeeding Mr. Gegenheimer, and **Wendell C. Allen,** superintendent, Philadelphia division, at Harrisburg, succeeds Mr. Fuchs at Chicago. **John W. Leonard,** superintendent passenger transportation on special duty, has been named chief of passenger transportation, succeeding Mr. Ernest, and **Kenneth J. Silvey,** now superintendent on special duty, takes over Mr. Allen's work as superintendent of the Philadelphia division. Mr. Leonard's successor is **Herman Flait,** now assistant superintendent passenger transportation, Eastern region; he, in turn is succeeded by **Eugene R. Pilot,** freight trainmaster. **Howard C. Kohout,** trainmaster, takes over Mr. Silvey's duties, becoming assistant superintendent, Eastern division, at Pittsburgh.

Ralph H. Skinner, Basil S. Cole and **Robert W. Valimont** have been advanced from assistant solicitors to assistant general solicitors in the legal department.

UNION.—**M. G. Stevens** has been promoted to general superintendent at Pittsburgh and will direct activities of the transportation, mechanical and

M. G. Stevens

stores departments. Mr. Stevens joined the Union in 1947 as superintendent of motive power and equipment.

UNION PACIFIC.—**R. R. Pope** has been appointed foreign freight representative at Los Angeles.

Leo J. Wagner has been named agricultural agent at Portland, Ore., succeeding **George L. Penrose,** who has resigned.

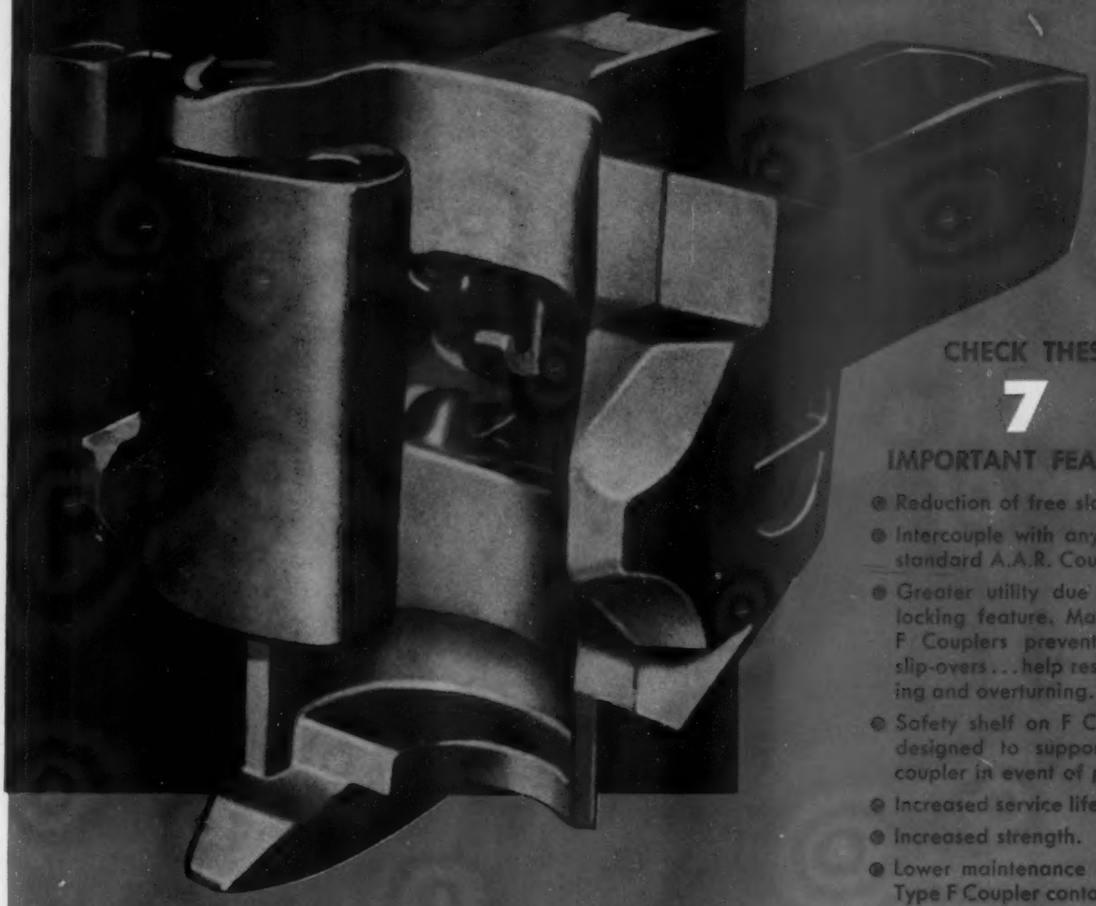
OBITUARY

Augustus Frisbie Cleveland, 79, who retired in 1947 as vice-president (traffic department), **Association of American Railroads,** at Washington, D.C., died there November 26 after a long illness.

For Improved Freight Service
Specify

TYPE F
INTERLOCKING COUPLER

for { LONGER LIFE
LESS MAINTENANCE
GREATER SAFETY



CHECK THESE
7
IMPORTANT FEATURES

- Reduction of free slack.
- Intercouple with any existing standard A.A.R. Couplers.
- Greater utility due to interlocking feature. Mated Type F Couplers prevent vertical slip-overs . . . help resist climbing and overturning.
- Safety shelf on F Coupler is designed to support mated coupler in event of pull-out.
- Increased service life.
- Increased strength.
- Lower maintenance cost with Type F Coupler contours holding gage longer because of less vertical movement and less free slack.

DETAILS AVAILABLE IN CIRCULAR NO. 5550

THE SYMINGTON-GOULD CORPORATION

Works: DEPEW, NEW YORK

New York • Chicago • St. Louis • Boston • San Francisco • In Canada: ADANAC SUPPLIES, LTD., Montreal, Que.

Santa Fe's 30 new "reefers" are "Roller Freight"

—progress that more than pays its own way!

WITH 30 new refrigerator cars on Timken® tapered roller bearings, Santa Fe is *more* than living up to its slogan—"Progress that pays its own way".

Timken bearings remove all speed restrictions due to bearings, permitting sustained high speeds that will help Santa Fe rush perishables to market in tip-top condition.

Besides eliminating speed restrictions, Timken bearings are the answer to the No. 1 cause of freight train delays—the hot box. Railroads are now paying for hot boxes at the rate of $55 million a year. Last year, with their friction bearing cars, they averaged only 251,920 car-miles between set-outs for hot boxes. According to the University of Illinois Bulletin #406, car-miles between set-outs for hot boxes is a poor measure of overall bearing performance. Based on the number of cars repaired for hot boxes, the average car-miles per hot box would be less than 70,000. Since Timken bearings *roll* the load, the hot box problem is eliminated.

Timken bearings also speed up freight because they require 90% fewer man-hours for terminal bearing inspection. All your men have to do is feel the journal box cover. And Timken bearings give lading a smoother ride because they cut starting resistance 88%. Cars can start jolt-free.

"Roller Freight" is the next great step in railroading. It can be the railroads' big selling point in going after tomorrow's freight business. And when all railroads go "Roller Freight," they'll save an estimated $190 million a year, net a 22% return on the investment. For more information, write: The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

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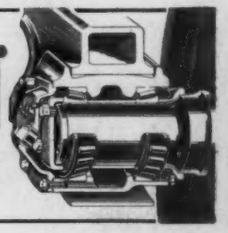
TAPERED ROLLER BEARINGS



NOT JUST A BALL ◯ NOT JUST A ROLLER ⬭ THE TIMKEN TAPERED ROLLER ⬭ BEARING TAKES RADIAL ⓪ AND THRUST →⓪← LOADS OR ANY COMBINATION